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ABSTRACT

Summaries of previous projects and present research needs precede this report of a study which investigated in detail one phase of music learning: overt music performance learning behaviors. The Observable Performance Learning Behavior Classification Index and the behavior encoding process were utilized to identify, to classify, and to time occurrences of four categories of learning behavior: verbal, motor (performance and nonperformance related), motor (performance related only), and attending. Descriptions of the study's recording equipment and techniques for its use, selection criteria for the 17 project subjects, data forms for each subject, a report summary, tables, photographs, and a bibliography are included. [Not available in hard copy due to marginal legibility of original document.] (MF)

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Final Report

Project No. 9-B-085

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IDENTIFICATION AND CLASSIFICATION OF MUSIC LEARNING BEHAVIORS UTILIZING VIDEOTAPE RECORDING TECHNIQUES

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of

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Rochester, New York

July 15, 1970

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ABSTRACT

Although lacking many important evaluation instruments, music educators are currently faced with the monumental task of designing new curricula to provide for learner behavioral growth and change. Until walid approaches to the teaching-learning interaction process are developed, decisions will continue to be made on the basis of subjective criteria. The present study investigates, by means of objective analysis, one phase of music learning in detail: overt music performance learning behavior.

Chapter I examines the need and rationale for research in the area of identification and classification of overt learning behavior. The precursors of this study are discussed and their strengths and weaknesses described in Chapter II. Chapter III describes the videotape recording equipment used during the project and outlines the techniques for its utilization. Also, the criteria for selection of the seventeen project subjects are reviewed in detail. Chapter IV consists of a description of the systematic inductive formulation of the Observable Performance Learning Behavior Classification Index and the behavior

encoding process. Through the use of the Index coupled with the encoding process, it was feasible to identify, classify, and time occurrences of specific overt music learning behaviors. The Index was structured to yield four main categories of behavior:

Type I Behaviors: Verbal

Type IIA Behaviors: Motor (Performance and Nonperformance Related)

Type IIB Behaviors: Motor (Performance Related Only)

Type III Behaviors: Attending

Specific observable behaviors were accommodated as subcategory listings. A data-gathering instrument was constructed for use during the analysis phase of the study.

The final chapter summarizes the report and indicates that the procedures for investigating overt music performance learning behaviors were successful. Through analysis of the encoded behavioral data, information concerning the learner and his learning environment was made available. The data forms for each subject are included in the Appendix.

Because of the approaches to behavior developed during the present study, it has become practicable to carry on further comprehensive research into the teaching and learning interaction process. Also, investigation into classroom climate

and learner behavioral change are suggested as valid outgrowths of the present study.

VITA

C. Charles Daellenbach was born July 12, 1945 in Rhinelander, Wisconsin. His father Conrad is a Music Instructor with the Manitowoc, Wisconsin Public Schools, and his mother Rebecca is the Manager of the Manitowoc County Credit Bureau.

During the summer of 1962 Daellenbach began undergraduate work on an Accelerated Bachelor of Music Degree Program at the Eastman School of Music. He received the Bachelor of Music degree in June 1966. Also in 1966, he was awarded a three-year NDEA Title IV Graduate Fellowship. He received the degree of Master of Arts in 1968, and was awarded a U.S.O.E. Small Contract Research Grant in the spring of 1969. During his years at the Eastman School of Music, he has been first tubaist in the Eastman Wind Ensemble and tubaist with the Eastman Philharmonia and the Rochester Brass Quintet.

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Daellenbach is married to the former Miss Monica Anne Gaylord. She is an NDEA Graduate Fellow in the Professional Division at Eastman. She is completing work toward a D.M.A. in Piano Performance and Pedagogy.

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This writer is deeply indebted to Dr. Donald J. Shetler, Associate Chairman of the Music Education Division of the Eastman School of Music, without whom this project would never have been completed. He was chiefly responsible for the motivation needed to carry out this study. Dr. Shetler was always willing to give his time and specialized assistance whenever needed.

A special debt of gratitude goes to Mr. Everett Gates, Chairman of the Music Education Division, who fostered this writer through undergraduate and graduate school at Eastman. He gave much valuable advice for the writing of this report.

Mrs. Donald L. Knaub, Music Specialist at the Twelve Corners Elementary School in Brighton, New York; Mr. Alan Bomwell, Instrumental Instructor with the Phelps Public Schools; and Mr. Rudy Hazucha, Instructor in the Eastman School Preparatory Department have all given invaluable assistance in the data collection phase of this study. Also, thank you to my good friend Mr. Roger Larsson who helped go over the many drafts of this report.

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CHAPTER I

STATEMENT OF THE PROBLEM AND NEED FOR THE STUDY

The failure of music educators to develop a valid experimental approach to the problem of evaluating learning behavior has frequently contributed to haphazard curriculum design. Until overt behaviors can be identified and classified, we are likely to deal subjectively with the teaching and learning interaction process. The problem is compounded in music education because of its reliance upon learning objectives most frequently classified in the "affective domain."[1] We must now begin to examine the music learning process in detail so that instructional strategies and behavioral objectives can be intelligently assessed. It is impossible to determine course of study effectiveness until it is possible to determine whether the student is or is not learning. A first priority in any attempt to examine music teacher-learner interaction is the identification of overt

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[1]David R. Krathwohl, B.S. Bloom, and B.B. Masia, Taxonomy of Educational Objectives, Handbook II: Affective Domain (N.Y.: David McKay Co., Inc., 1964).

music learning behaviors.

The overall problem related to inadequate study of the learning environment has not been limited to music; rather, it pervades most research in teaching and learning. One central shortcoming is evident in most of the available research on classroom behavior. Verbal behaviors have been the focus of these studies, often at the expense of any consideration of nonverbal behaviors.

There are several reasons for this apparent disinterest in consideration of nonverbal behavior. Firstly, verbal behavior is relatively easy to record and analyze, with regard to direction, type, and quantity. Also, it is often assumed to be the controlling factor in teaching and learning. Neglect of nonverbal behaviors within the educational processes often results. Secondly, traditionally abstract descriptions of nonverbal behavior have made precisely controlled observation extremely difficult. Until the advent of videotape recording units, accurate observation of diverse teaching and learning behaviors was not possible. Videotaped recordings can be viewed repeatedly, and a multitude of specific behaviors may be thoroughly analyzed. Thus, subjective paper-and-pencil records of classroom activity can be eliminated. Thirdly, predetermined behavior category systems

often had been devised prior to a detailed study of the behaviors being inspected. As a result, a variety of behaviors not included in the initial systems were not accounted for effectively. An important early study of teacher effectiveness by Morsch (cf. p. 26) provides an example of problems inherent in this approach.

PURPOSE

This study was designed to investigate overt verbal and nonverbal behaviors exhibited by students actively involved in a music performance learning environment. Nonverbal considerations are particularly important in an investigation of music learning, since most music study involves a high percentage of nonverbal action. In a study of teaching behavior completed in 1968 by the present writer,[2] it was shown that more than 50 percent of instructional time was spent in nonverbal activity.

With the importance of nonverbal behavior established, it becomes apparent that a reliable system is needed for identifying and classifying

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[2]C. Charles Daellenbach, "An Investigation of the Use of Videotape Recorder Techniques in the Identification of Behavioral Characteristics of Music Teachers" (unpublished Master's thesis, Eastman School of Music of the University of Rochester, June, 1968).

specific nonverbal behavioral characteristics in a music learning environment. The present study includes 1) a procedure for identifying specific overt behaviors, and 2) a classification system based on this procedure. From the outset, the major concern has been to ascertain with precision what occurs in the music learning environment. To summarize, the following may be regarded as the objectives of the present study: 1) development of a valid, experimental approach to the collection of overt music learning behavioral data; 2) development of a behavioral characteristics identification procedure; 3) construction of a reliable system for categorization of behavioral characteristics.

DELIMITATIONS OF THE STUDY

No attempt has been made in this study to assign a value or to make a quality judgment with respect to any of the observed behaviors. Strict adherence to the previously stated objectives was maintained. Consideration of positive or negative traits is a subject for future research. No evaluation of musical achievement, or of increase in performing competence as a result of learning, is included. The behaviors exhibited while in the learning environment are the only matter of

investigation. Behavior samples used in this study were collected by means of low-cost, portable videotape recording equipment. Because sophisticated installations, expert engineering assistance, and expensive remote control facilities were unavailable, it was impossible to collect samples of certain actions that might warrant more detailed investigation. For example, it was not possible to detect minute eye movements or certain muscular responses observable only when close-up lenses are utilized.

PREVIOUS RESEARCH OF THE PRESENT WRITER

This present study is the second phase of an extended research effort in the evaluation of music teaching and learning behavior. To properly effect a project such as this, a sequence of component studies must be undertaken. Firstly, the data-gathering equipment (the videotape recorder) must be investigated as to its adaptability to a project concerned with the collection of behavioral data. Secondly, the feasibility of behavior identification and classification by means of inspection of videotaped sequences of music teachers actively engaged in teaching needs testing. Thirdly, the development of a reliable and valid technique for identification and classification of teaching behaviors must be

carried out.

Results of work in each of the areas mentioned above were reported in the writer's Master of Arts thesis.[3] Since many of the procedures for the present study are based on these results, a short review is appropriate here.

The previous study was designed to identify music teaching behaviors at several instructional levels, several levels of teaching experience, and in music teaching environments ranging from studio to large group instruction. No attempt was made to arrive at qualitative value judgments relative to the teaching behavior observed.

Since qualitative value of observed behaviors was not the focus of this study, subjects were not selected according to any predetermined qualitative criteria. Initially, the only limitation was that the sample be chosen from teachers currently teaching within an educational framework, either public or private, in the Rochester, New York area. Included were studio teaching (individual or small class), small ensemble teaching, large ensemble teaching, and conducting (within an educational system). Having more than one environment represented provided a

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[3] Ibid.

cross-section of music teaching situations. The range of situations also included types of instruction. These types were string, wind, percussion, vocal, and conducting. Similarly, levels of teaching experience were noted to ensure a cross-section of "highly experienced," "experienced," "young," and "novice" teachers. To achieve a stratified range of environments, and a representative range of teaching experience, the following categories were employed:

I. Type of teacher

   A. Subjects with experience totaling more than ten years (Nos. 1, 2, and 3)
   B. Subjects with experience totaling six to ten years (Nos. 4, 5, and 6)
   C. Subjects with experience totaling one to five years (Nos. 7, 8, and 9)
   D. Subjects with limited experience (student teachers) (Nos. 10, 11, and 12)

II. Types of music teaching situations

   A. Large group instruction
   B. Small group instruction
   C. Individual instruction

III. Types of instruction

   A. Instrumental
      1. Wind
      2. String
      3. Percussion
   B. Vocal
   C. Conducting techniques

(Refer to Appendix A, which indicates each subject's location, teaching situation, and type of instruction.)

Procedure for Behavioral Sample Collection

Videotape recording equipment was brought to the subject's school far enough in advance of class meeting time that class sessions would not be disrupted during setup. A most important consideration was the attempt to keep students' classroom activity completely normal and undistracted. This in turn allowed the teacher to behave as he normally would. When video equipment was being set up, it was in many instances also being explained to the teacher-subject so that he would understand operating procedures that were about to begin. The subjects were always advised that any taped sequences which they did not want to remain on videotape would be erased before leaving their room (though none of the subjects exercised this option, it did reduce the fear of "looking bad" on tape that others could see). Secondly, they were told that only the writer and his advisor would at any time have access to the videotapes.

Depending on the physical plan of the music rooms, the author attempted to have only a microphone visible to the students, with the camera behind or to the side of them. The monitor and recorder, in optimum situations, were then put into an adjoining room.

Students were told that the equipment was there to view only their teacher. Younger students

were told that they, too, would be given a chance to see themselves on television towards the end of the class time. This reduced possible anxiety due to involvement with this "strange" equipment. When the machine and monitor were not in the same room there was no possibility of distraction by sound from the recorder in operation.

One-hour videotapes were used to gather all behavioral samples. Collection of more than one type of instruction or situation for each subject was sought. This was possible for all except three subjects who were teaching large vocal or instrumental ensembles for long periods of time. These longer rehearsals provided sufficient variance in teaching behaviors for the data collection purposes of this study.

To create equal length videotaped sequences of each subject for final screening purposes, a ten-minute teaching sample of each was dubbed from original tapes onto a master tape. Selection of the material to be retained for the use of this project was made on a random basis. The only limitation was that the final taped sequence had to constitute ten minutes of uninterrupted teaching time. Since there were twelve subjects, two final master tapes including sixty minutes of teaching each were required.

Behavioral Factors

A behavioral characteristics chart was devised based on data observed from videotapes. The following four categories of behavior provided the structural basis for detailed analysis of the videotape samples:

1. Verbal behaviors (inclusive)
2. Nonverbal behaviors
3. Conducting behaviors
4. Model behaviors

These four main considerations incorporated most possible types of behavior. Further inspection of the unedited videotapes provided the specific behaviors that might suggest further classification. The final, expanded observable behaviors list was developed from trial of experimental lists. When behaviors occurred that had not been catalogued, they were added; likewise, when it became obvious that some listed behaviors were ambiguous, redundant, or simply useless, they were changed, replaced, or dropped from the list. The result was the behavioral characteristics list presented in Table 1.

Specific behavioral characteristics were grouped according to their relevance to the categories. Each category was limited to behaviors that would not normally occur simultaneously, thus facilitating clear delineation among the many behaviors exhibited by the subjects. For example, "conducting behaviors" could not be grouped with other nonverbal behaviors, since

TABLE 1

LIST FOR IDENTIFICATION OF
TEACHER BEHAVIORS

I. Verbal behaviors

A. Directions or instructions
B. Information or teaching
C. Positive reinforcement
D. Negative reinforcement
E. Questioning
F. Disciplinary comments
G. Manneristic use of a word or phrase

II. Nonverbal behaviors

A. Directed motor behavior
B. Nondirected motor behavior
C. Random or impromptu mannerism
D. Patterned mannerism
E. Concentrated listening

III. Conducting behaviors

A. One-hand (patterns, tempo)
B. One-hand (interpretations)
C. Two-hand (patterns, tempo)
D. Two-hand (interpretations)

IV. Model behaviors

A. Playing (alone--solo model)
B. Singing (alone--solo model)
C. Playing (with student)
D. Singing (with student)
E. Baton or implement tapping
F. Foot beating
G. Clapping

other behaviors could logically occur while conducting was taking place. Being organized in this way, screening of taped sequences was far easier since only one category needed analysis during each playthrough of the recorded videotape. This plus the fact that the sequences could be replayed as often as desired helped eliminate identification or timing errors.

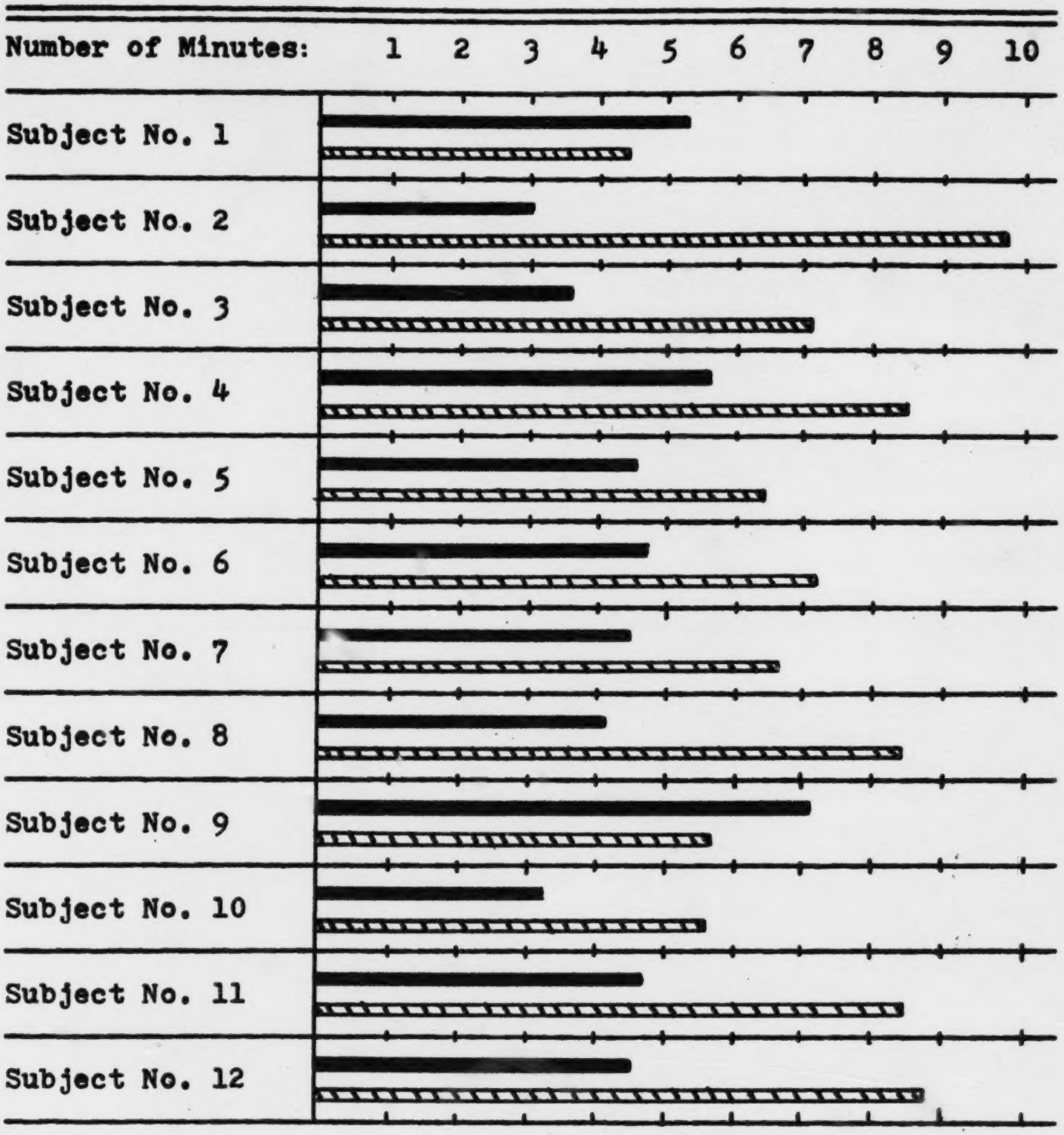
Results

Table 2 indicates the relationship of time spent on verbal activities to time spent on nonverbal activities (nonverbal in this case meaning behaviors classified under the headings "nonverbal behaviors," "conducting behaviors," and "model behaviors"). Similarly, Table 3 compares the number of verbal behavior occurrences to nonverbal occurrences (refer to Appendix A, 2 and A, 3 for charts relating the exact record of occurrences).

Note that for ten of the twelve subjects, verbal behaviors were in evidence for less time than were nonverbal behaviors (refer to Appendix A, 4 for the chart giving precise timings). Also, the numerical record of behavioral occurrences indicates that most of the subjects exhibited approximately equal numbers of verbal and nonverbal behaviors.

TABLE 2

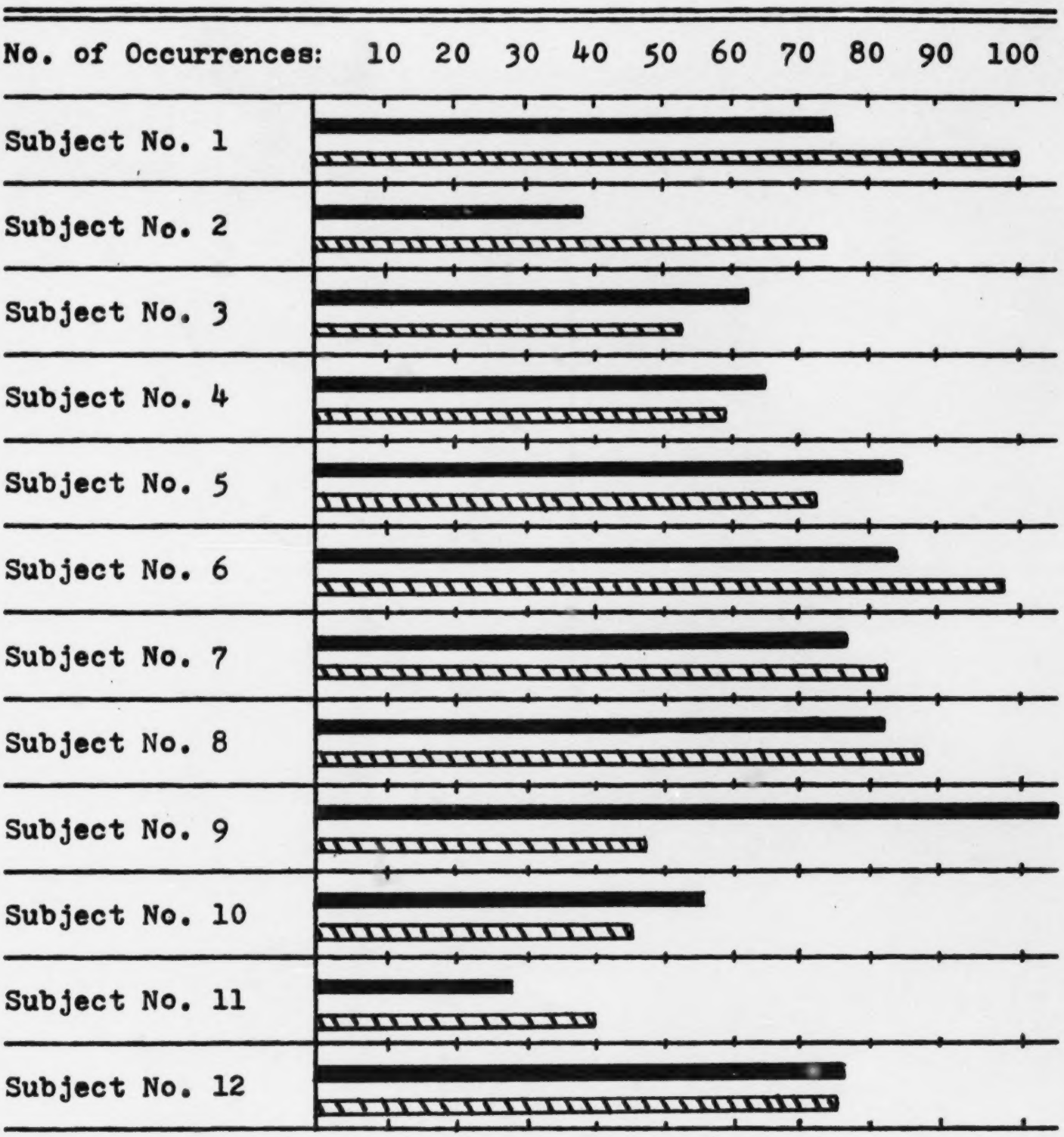
TIMINGS OF VERBAL BEHAVIORS COMPARED TO TIMINGS OF NONVERBAL BEHAVIORS



Legend: Verbal
Nonverbal

TABLE 3

NUMBER OF VERBAL OCCURRENCES COMPARED TO
NUMBER OF NONVERBAL OCCURRENCES



Legend: Verbal
Nonverbal

Conclusions

The data gathered for this study tend to support the conclusion that verbal behavior plays a principal role in music teaching. However, the high coincidence of nonverbal behaviors is extremely significant. In certain types of music teaching nonverbal factors are on a level of even greater significance than are verbal factors. Hence, this study contributed an important perspective not treated in previous research.

The use of a videotape recorder as a highly effective tool for recording behavioral data and for detailed analysis of specific teaching behaviors has been justified by this study. Evaluation can be made on a far higher level of sophistication than is possible when traditional procedures are followed. Just as the audiotape recorder proved to be a successful adjunct to verbal behavior investigation, the videotape recorder has now become recognized as a valuable tool for any truly comprehensive study of behavior. This study offered a fundamental basis on which to design continued research dealing with a wide variety of questions related to teacher behavior.

CHAPTER II

RELATED LITERATURE

Educational research often depends on recorded behavioral data. Customary methods have up to now included anecdotal records, check-lists, and rating scales. Two of the better known of these methods are 1) the behavioral traits observation method known as the "Critical Incidence Technique," developed by John C. Flanagan,[4] Director of the American Institute for Research, and 2) "Categories for Interaction Analysis," developed by Ned A. Flanders.[5] The critical incidence technique bases its data collection procedures on an in-room observer. This observer is charged with the responsibility of recording in writing, all classroom activity in relation to clock time. Unfortunately, there is no way to review a classroom occurrence before providing comments about it. Also, the system is only as objective as the

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[4]John C. Flanagan, "Research Techniques for the Development of Educational Objectives," Educ. Rec. (April, 1947), pp. 139-148.

[5]Edmund J. Amidon and Ned A. Flanders, The Role of the Teacher in the Classroom (Minneapolis: Assoc. for Productive Teaching, Inc., 1967).

evaluating personnel. There is no possibility for dispute, due to the "one shot" nature of the task.

Flanders' "Critical Incidence Technique" is considered by many the classic model of its type. The focus is on the teacher in an interaction situation. Table 4 presents Flanders' Categories for Interaction Analysis.[6] These categories provide the potential for careful and systematic categorization of classroom verbal behavior within the dimension of time. The intent of the system is "to help teachers, supervisors, and other educators directly concerned with the teaching-learning process to understand more fully and to improve the role of the teacher in the classroom."[7] This system has many possible uses, ranging from research applications to teacher self-evaluation and teacher training. Even with the system's inherent flexibility it is limited, since it can proceed no further than verbal behavior; non-verbal considerations can not be treated.

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[6]Ibid., p. 14.

[7]Ibid., p. 1.

Table 4: Categories for Interaction Analysis has been deleted for ERIC reproduction.

Winnifred Fenton's paper "Effectiveness of Music Teachers Identified Through Behavioral Criteria: A Basis for Redirection in Teacher Education," provides evidence regarding the weakness in utilization of a subjective rating scale or method such as the "critical incidence" technique. She made judgments as to the probable success of student teachers, and their abilities according to inherent traits (such as emotional stability) for which she had no reliable data relating them to successful teaching. The decisions were made in collaboration with "experts," though no attempt was made to define the term.[8] The potential for error was highly evident.

Indicative of the current state of videotaping class sessions is Herbert Liberman and Watson Swope's article, "Analyzing Student Behavioral Patterns with CCTV."[9] They report work carried out at Yorktown Heights, New York with videotape recordings and the Flanders Analysis System. The taping program was divided into three stages: 1) videotaping all first year teachers six to nine times, 2) analyzing the

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[8]Winnifred L. Fenton, "Effectiveness of Music Teachers Identified Through Behavioral Criteria: A Basis for Redirection in Teacher Education" (unpublished Ed.D. dissertation, Department of Education, Wayne State University, 1957), p. 152.

[9]Herbert Liberman and Watson Swope, "Analyzing Student Behavioral Patterns with CCTV," Audiovisual Instruction (Nov., 1969), pp. 50-51.

taped sequences according to Flanders' analysis system, and 3) a conference between the CCTV coordinator and the teacher. It is stated in the article that teachers in the program become acutely aware of the students' behavior. In fact, this becomes the main focus of attention. It is obvious that no attempt has been made by the teachers or staff to begin systematic analysis of observed student behavior. Therefore, the result is an informal utilization of a tool that could offer a route to highly sophisticated study of learning behavior.

A. D. Woodruff and J. L. Taylor's paper presented during the MENC RTP (Research Training Project) preconvention workshops (1968-1969) called for a thorough re-evaluation of man and his learning environment in terms of a clear approach to study of environment and redesign of instruction within it. Dealing with the complex man/environment interaction, the authors list critical properties of this interaction:[10]

> 1. It is largely nonverbal and adjustive, although the person can verbalize about it.
>
> 2. The person is doing something overt to satisfy his wants.
>
> 3. What he does involves a full cycle of behavior, including perception, thinking and

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[10]Asahel D. Woodruff and Janyce L. Taylor, "A Teaching Behavior Code," unpublished paper presented at the MENC's Preconvention RTP Workshops, 1968-1969, p. 14.

> conceptual organizing, choosing a line of response, executing the choice, the precipitation of a consequence from the act, and the perception of the consequence and the way it affects him.
>
> 4. The person's decision is for real, and he receives the consequences of his act.
>
> 5. He may perceive these consequences very accurately or very inaccurately, but his behavioral pattern is shaped by what he perceives.
>
> 6. As a result of his perception he acquires or modifies the concepts and competencies he will use subsequently in trying to achieve his goals.
>
> None of these conditions exist in today's schools, even where there has been a shift to behavioral objectives, with the exception of a few task-oriented programs such as the shop, or the debating team, and others like them.

These properties have meaning for a learning behavior study, since they clearly delineate the meaning of exhibited learning behaviors within the context of life in general. Overt behaviors can not be considered one-dimensional; rather, they are the observable manifestations of a thinking, feeling organism.

Donald E. Mowrer discusses the need for controlled research into teaching and learning in his article, "The Language of Behavioral Engineering."[11] Though good teachers are well aware of current strategies, controlled observation is necessary to assure most effective teaching. The result will be engineered student behavior change.

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[11]Donald E. Mowrer, "The Language of Behavioral Engineering," Educational Technology (July,1969), pp. 34-36.

> Every teacher who keeps abreast of current trends in education is aware of the expanding changes occurring in the technology of teaching. With the development of the new technology comes an increased understanding of the process of educating children. Recently we have been more concerned with what a teacher <u>does</u> in the classroom in order to be considered a good teacher rather than looking at teaching methods <u>per se</u>.
>
> If Aristotle were alive and teaching today, he would no doubt experience great difficulty using our new educational media, and understanding our terminology. However, it is probable that his basic teaching techniques would remain, for the most part, unchanged. The important difference in teachers of yestercentury and today's teachers is that we are now better prepared to identify precisely just what makes Aristotle-like teachers, good teachers.[12]

Through increased research about the learner, greater expertise in evaluation of teaching effect as measured by student growth will result.

> . . . we used to talk about a child's behavior in terms of his attitude, his feelings, his perception and the like; but since there is no precise way of measuring these factors, it is difficult to evaluate the effect of teaching upon attitude or feelings. On the other hand, we can make precise statements about the child's observable behavior. We can count the number of times he hits another child, the minutes he spends writing answers to math problems, the frequency of volunteering answers to the teacher's questions and the like.[13]

An especially thorough review of the history of classroom observation is presented in Medley and Mitzel's article, "Measuring Classroom Behavior By

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[12] <u>Ibid</u>., p. 36.

[13] <u>Ibid</u>., p. 35.

Systematic Observation."[14] To set the stage in favor of personal observation of behavior, the following rationale was presented:

> Certainly there is no more obvious approach to research on teaching than direct observation of the behavior of teachers while they teach and pupils while they learn. Yet it is a rare study indeed that includes any formal observation at all. In a typical example of research on teaching, the research worker limits himself to the manipulation or study of antecedents and consequents of whatever happens in the classroom while the teaching itself is going on, but never once looks into the classroom to see how the teacher actually teaches or how the pupils actually learn.[15]

The authors point out that any possible objections about teachers and students not maintaining normalized class activity while being observed are pointless, since the comparison then becomes one of observation with slight disruption, or no observation at all. For these writers, it is the goal of observers to abstract those aspects of behavior relevant to the scoring process. Of utmost importance in this kind of in-room observation are 1) a level of abstraction not so broad that the observer is unable to cope with the many categories, and 2) that the behaviors be coded and recorded as soon after they occur as possible. Human memory can not be accurate enough for delayed

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[14]Donald M. Medley and Harold E. Mitzel, "Measuring Classroom Behavior by Systematic Observation," Handbook of Research on Teaching, ed. N. L. Gage (Chicago: Rand McNally and Co., 1963), pp. 247-328.

[15]Ibid., p. 247.

recording.

One of the earliest indices attempting to produce an objective class activity was devised by E. Horn in 1919.[16] The observer was to mark a circle next to a student's name for each recitation or request for a recitation, and a square for any other kind of student response. The results, therefore, identified pupil participation distribution.

This simple two-mode system was refined in 1928 by R. C. Puckett. Now the system became more complex, calling for value judgments to be made by the observer (see Table 5, following page).[17] These symbols were placed in a grid next to each student's name.

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[16] Ibid., p. 254.

[17] R. C. Puckett, "Making Supervision Objective," School Review, XXXVI (1928), p. 210.

Table 5: Items Used by Puckett for Response Analysis has been deleted from ERIC reproduction due to copyright restrictions.

The authors also comment about the problem of observers going into a classroom with preconceptions about what behaviors they are looking for. Hence, evaluation is made according to what is expected rather than on what is actually in evidence.

An important study was carried out in 1956 at a U. S. Air Force school by J. E. Morsch. Morsch was of the opinion that ratings of instructor effectiveness depended on observer skill and experience for their validity. He attempted to devise a behavior category system that would eliminate this variable. To accomplish this goal, the following problems needed solving: 1) which behaviors of instructors and their students can be reliably and systematically observed, and 2) do instructor behaviors that can be observed tend to be typical and consistent.[18] Morsch devised the behavioral items presented in Table 6. They were designed to eliminate qualitative judgments and to reduce to a minimum the amount of training necessary to be able to observe the behaviors.

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[18]Ibid., p. 261.

TABLE 6

ITEMS USED BY MORSCH IN OBSERVING
CLASSES IN AN AIR FORCE SCHOOL

Instructor Verbal Behavior

- Gives aims
- Defines terms
- Explains
  - a. Fact
  - b. Training aid
- Asks:
  - a. Designates student, asks question
  - b. Asks question, designates student
  - c. Class question
  - d. For question
- Answers:
  - a. Own question
  - b. Student question
- Repeats:
  - a. Student answer
  - b. Key point
  - c. Pet word
- Gives example
- Gives directions
- Calls student:
  - a. By name
  - b. Other
- Threatens, warns

Instructor Non-Verbal Behavior

- Stands:
  - a. Behind desk
  - b. At board
- Moves:
  - a. Center, rear
  - b. Other
- Leans on desk
- Smiles
- Demonstrates:
  - a. Training aid
  - b. Gestures
  - c. At board
- Looks at notes, course outline
- Uses board:
  - a. Key term
  - b. Diagram
  - c. Erases

TABLE 6--Continued

Student Behavior
Raises hand
Talks
Answers:
a. Recognized
Asks questions:
a. Recognized
Looks around
Doodles
Slumps
Yawns, stretches
Class answers
Sleeps or dozes
Ignores instructor
Smiles

Source: Adapted from J. E. Morsch, "Development Report--Systematic Observation of Instructor Behavior," USAF Personnel Training Research Center Development Report (1956) AFPTRC-TN-56-52, by Medley and Mitzel, "Measuring Classroom Behavior by Systematic Observation," p. 262.

Other systems are reviewed by Medley and Mitzel; of these, some have developed measures of climate (attitude) dimensions. Unfortunately, it is usually necessary to infer climate considerations from (hopefully) related overt behaviors, such as frowning, smiling, and the like. Finally, the authors urge the use of detailed data analysis by any personnel researching classroom behavior.

To help implement the formulation of a behavioral characteristics list, the study Introduction to Kinesics: An Annotation System for Analysis of Body Motion and Gesture, by Ray L. Birdwhistell, is highly informative. The study of kinesics is in fact a study of body motion. The body has been divided into areas for the purpose of investigation:

1. Total head
2. Face
3. Neck
4. Trunk
5. Shoulder-arm-wrist
6. Hand
7. Leg-ankle-hip-joint
8. Foot[19]

A single movement is called an act, and a series of movements of a continuous kind is labeled an action. Birdwhistell cautions the novice to be aware that he, the novice, is not capable of recording every kine (movement) in a given situation. Particularly restricting are the limits of the novice's own background.

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[19]Ray L. Birdwhistell, Introduction to Kinesics: An Annotation System for Analysis of Body Motion and Gesture (University of Louisville: Louisville, Kentucky, 1952), p. 17.

He will be able to recognize little else in the action than that which is also concomitant to his own life-space.

Birdwhistell offers these very pertinent statements on the study of movement and gesture in his summary of factors necessary for proper kinesic evaluation:

A. No motion is a thing in itself. It is always part of a pattern. There is no "meaningless" motor activity.

B. Until otherwise demonstrated, body motion patterns should be regarded as socially learned.

C. No unit of motion carries meaning <u>per se</u>. Meaning arises in context.

D. An informant's statement regarding his own motion should be regarded as data rather than explanation.[20]

The later chapters of the Birdwhistell work include complete examples of the devised annotation system to use in identifying movement. His annotation system can be used in a behavioral study, as a greater part of the system deals with movements under investigation in a study of music learning behavior. Repeated viewings of videotape appear to offset Birdwhistell's concern for the novice's lack of prior work with identification and inability to capture all the action in a single eye-to-eye observation.

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[20]Birdwhistell, <u>Introduction to Kinesics</u> . . ., p. 10.

Highly scholarly research on the problem of identifying biology teacher behaviors was successfully undertaken by Thomas P. Evans at Ohio State University.[21] The purpose of Evans' project was to include the consideration of nonverbal behaviors while studying classroom teacher behavior. Therefore, the hypothesis was stated as follows: ". . . a reliable category system for firsthand systematic observation of the verbal and nonverbal behaviors of high school biology teachers, in both classroom and laboratory instructional situations, can be developed."[22]

To construct the category system itself, videotapes of teacher behavior were viewed. Any occurrences of behavior that contributed to the teaching-learning situation were listed. Thus, the system included the following categories:

> (1) Management, (2) Control, (3) Release, (4) Goal Setting, (5) Content Development, (6) Affectivity, and (7) Undecided. Routine, laboratory, and study management were the subcategories of management. Content development was either teacher centered (5a), or student centered (5b). Teacher centered and student centered content

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[21]Thomas P. Evans, "An Exploratory Study of the Verbal and Nonverbal Behaviors of Biology Teachers and Their Relationship to Selected Personality Traits" (unpublished Ph.D. dissertation, Ohio State University, 1968).

[22]Ibid., p. 144.

> development was subdivided into procedures (5-1), knowledge (5-2), scientific process (5-3), tentativeness of knowledge (5-4), generalizations (5-5), articulation of content (5-6), and facilitates communication (5-7). Each of these subdivisions could be communicated in one or more of the following ways: (a) States, (b) Asks, (c) Shows, (d) Acknowledges, and (e) Clarifies. Negative (6a) and positive affectivity (6b) were the subcategories of affectivity.[23]

Encoding observed behaviors resulted from viewing the videotapes in order to identify, classify and subsequently record on a data record occurrences of teacher behavior. To yield the perspective of time, ten-second intervals were employed. Timing was indeed necessary; for example, if a teacher exhibited a control behavior for one minute and a management behavior for twenty seconds, it would not have been accurate to describe this situation as one occurrence of a control behavior and one occurrence of a management behavior. The time dimension allowed for a precise record, since a running account of behavior became available. The predominant behavior for each interval was that behavior which consumed the greater portion of a ten-second interval.

A test for reliability was made using two observers, independently observing fifteen five-minute, randomly drawn videotaped sequences. Inter-observer agreement was found to be .92 using Scott's formula

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[23]Evans, "An Exploratory Study . . .", p. 127.

(1955). Therefore, the hypothesis was accepted. Evans summarized the reasons for apparent category success in a recent article:

> . . . this high level of agreement stemmed back to the development of the instrument and method of encoding. First, a videotape recorder was used to 'capture' teacher classroom behaviors. The 'captured' behaviors were observed as often as the observer desired. Secondly, the instrument was inductively developed. Teacher behaviors were first identified and became the basis on which the categories and subcategories were identified and defined. Thirdly, the method of encoding enabled the predominant behaviors for each time interval to be empirically, rather than subjectively determined.[24]

To summarize, most research concerning teaching and learning classroom behavior has had to rely on subjective value judgments made by evaluating personnel. Also, most of the well-known techniques for recording behavior have dealt with verbal behaviors only. Not until very recently, with the advent of highly portable videotape recording units, has classroom behavior been permanently "captured" for later in-depth analysis and objective measurement. The possibility of arriving at erroneous conclusions about overt behavior has been significantly reduced when that behavior is reconstructable via videotape.

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[24]Thomas P. Evans, "A Category System for Teacher Behaviors," The American Biology Teacher, XXXI:4 (April 1969), p. 225.

CHAPTER III

PROCEDURES

DESCRIPTION OF THE EQUIPMENT

The videotape recording equipment used for this study was the "Tri-Pack" system developed in 1966 by the General Electric Corporation. The Tri-Pack (Model PT-3-A) consists of three basic units; they are:

1. Videotape recorder (Model 4TD1B2)
2. Vidicon camera (Model TE-33) and tripod
3. 12" television monitor (Model TH-31-A/B)

Each of the units is contained in a grey luggage-type carrying case. The recorder is a half-inch helical scan transistorized model which operates at a tape speed of 7½ inches per second. The vidicon camera is useable in most situations since it needs no more than ordinary room light for operation. A General Electric microphone (Model DM-170) was employed principally because of its omnidirectional pick-up pattern and its unobtrusive size, both of which were necessary prerequisites for this project's videotape recording.

Ease of portability eliminates the necessity

for bringing subjects to a television studio; rather, the equipment can be set up quickly by a single operator for on-location taping. Therefore, the portable videotape recording unit affords a logical substitute for the in-room observer, since classroom activity can easily be "captured" on videotape with minimum intrusion on the normal learning environment.

Twenty-five Memorex Brand videotapes were used for this project. Ten of these were 2400 foot (60-minute) reels, and fifteen were 1200 foot (30-minute) reels.

Plate I illustrates the equipment used during this study. Plates II and III show the equipment set for the taping of a music lesson. Students are getting an opportunity to view themselves in action after completion of a project tape in Plate IV.

PLATE I

TRI-PACK VIDEOTAPE RECORDING EQUIPMENT

PLATE II

IN-ROOM EQUIPMENT OPERATION

PLATE III

REMOTE OPERATION OF VIDEOTAPE RECORDER AND MONITOR

PLATE IV

STUDENTS TAKING ADVANTAGE OF
REPLAY CAPABILITY

BEHAVIORAL SAMPLE COLLECTION

In research involving the study of learning behavior, a most important issue is the development of observational techniques which will minimize disruption of the instructional setting. As previously pointed out, numerous studies have fallen short of their desired objectives because of reliance on personal in-room observation. The presence of an observer attempting to observe "normal" behavior often becomes an inhibiting factor. Therefore, it is logical to avoid this weakness through the use of videotape recording techniques. Care must be exercised, however, so that one disruptive element is not replaced by another one. Therefore, a well-designed procedure for equipment utilization during videotaping sessions has been developed and tested.

During experimental taping sessions, it became evident that the presence of all the video equipment in the same room with the learner was not a desirable situation. The students exhibited a high degree of curiosity about the camera, recorder operating sounds, monitor, and equipment operators. Consequently, very little could be considered

"normal" about these class sessions. A necessary first step was elimination of as much equipment as possible from the classroom, putting it into an adjoining room or hallway. Only the video camera and microphone remained inside the room. Thus, the recorder, monitor, and operational personnel no longer created distractions for the students. The camera and microphone were completely noiseless and stationary; the camera lens was fixed and focused on the location of the learner being videotaped, with no further camera adjustments necessary. Therefore, inside the classroom, no additional lighting was needed. There was no way for the students to know whether or not recording was underway.

In most situations the camera was positioned in a front corner, while the microphone was located in a completely inconspicuous area to the side of the room. Setup of the equipment was always accomplished well in advance of the scheduled class meeting time so that students' initial impressions would not be based on the commotion which accompanies the assembly of components and their connecting cords. Even in small studios where the camera was likely to be more noticeable, students' suspicions were easily placated through statements implying that the equipment was to be used at some later time and had

nothing to do with this particular class. Only after recording were they informed about the project and allowed to view the videotapes if they wished.

Three videotape recording sessions were scheduled for each learner being studied. The first session was a preliminary test of the taping procedures, and the adaptability of the location. The other two sessions were for the data collection phase of this project. These two sessions consisted of the following: 1) setup of the video equipment, 2) recording the subject for an entire class period, and 3) disassembly of the equipment. As a result of this taping, approximately 1020 minutes of learning behavior data were gathered on work tapes. From each of two tapes recorded of each learner, one random ten-minute segment was selected for analysis as a final project tape. Selection of a segment from each videotape provided opportunity for detailed study of the student at two different learning times. Assembly of the final videotapes used for the screening phase of this study employed electronic editing techniques. A total of 340 minutes of class time for seventeen students constituted the final project videotapes.

SUBJECT SELECTION

Personal contact was made with many music teachers in the Rochester area in an attempt to determine interest in a learning behavior study and to identify an available research population. After explaining the nature of this project and the minimal demand that it would place on the supporting teacher, it was determined that certain teachers were willing to cooperate in the research. Having received commitments from the music teachers, the criteria for subject selection was formulated to determine which students would be asked to contribute to this study.

It was decided that a sample of seventeen students representing the music learner in a wide variety of instructional environments was desirable, with the sample representing equalized distribution. Therefore, the sample for this study was drawn from a population that represents a wide range of both music learners and learning environments. The following two tables summarize the distribution of these elements of the sample.

TABLE 7

AGE LEVELS FROM WHICH SUBJECTS WERE DRAWN

Level I	Preschool Age (3-5 years)
Level II	Elementary School Age (5-9 years)
Level III	Middle School Age (9-13 years)
Level IV	Senior High School Age (13-18 years)
Level V	College Age (18 years--)

TABLE 8

LEARNING ENVIRONMENTS IN WHICH SUBJECTS WERE ENGAGED

Environment I	Private Lesson (Studio)
Environment II	Small Group Lesson (2-3)
Environment III	Large Group Lesson (over 3)
Environment IV	Group Rehearsal

On the basis of this sample identification, it was found that four teachers were needed to supply subjects for this study. These four were sought out and their willingness to collaborate confirmed. Clearance for the videotape recording of student behavior was arranged with their respective administrative personnel. Since there were no qualitative decisions to be made regarding the learner, and since the videotapes were not to be distributed with the results of this study, it was not necessary to solicit parental approval for recording. However, there was one stipulation: the learners used as subjects were not to be specifically identified by name in this final report.

Since the focus of this study was on performance learning behaviors, a wide range of media of performance was sought. Types of performance media ultimately included were, 1) wind instruments, 2) string instruments, 3) voice, and 4) percussion. The frequency at which each of these performance categories occur was not an important factor. Again, equal representation served as the important element; comprehensive inclusion of any one, or all kinds of performance media was beyond the scope of this particular study. For each teacher supporting this project a specific genre of performance was being

taught. Since individual subjects were randomly selected, no control could be exerted over the kind of woodwinds, or number of trombones, for example, that would constitute the subjects' performance media.

Table 9 details each subject's age level, learning environment, performance medium, and school location.

TABLE 9

THE SUBJECTS IDENTIFIED*

Subj. Number	Level	Learning Envir.	Perf. Medium	Location
1	I	II	violin	Eastman School Preparatory Dept.
2	II	II	violin	Eastman School Preparatory Dept.
3	II	II	violin	Eastman School Preparatory Dept.
4	III	IV	clarinet	Phelps Central Schs.
5	III	II	snare drum	Phelps Central Schs.
6	III	I	flute	Phelps Central Schs.
7	II	III	voice	Brighton, Twelve Corners Elementary
8	II	III	voice	Brighton, Twelve Corners Elementary
9	III	III	voice	Brighton, Twelve Corners Elementary
10	III	III	trombone	Phelps Central Schs.
11	III	I	tuba	Phelps Central Schs.
12	IV	I	baritone	Phelps Central Schs.
13	IV	IV	saxophone	Phelps Central Schs.
14	IV	IV	trombone	Phelps Central Schs.
15	V	II	French horn	S.U.C. at Geneseo
16	V	I	trumpet	S.U.C. at Geneseo
17	V	I	tuba	S.U.C. at Geneseo

*Note: Refer to Tables 7 and 8 for meaning of Roman numerals.

No attempt was made to include all possible performance media, but an effort was made to be highly representative in the choice of subjects. Age levels and learning environments to be included were predetermined. However, selection of a specific subject from all students available in a specific learning environment was in each case arbitrarily arrived at by both the instructor and the present writer. Table 10 indicates the distribution of subjects in relation to levels and learning environments.

TABLE 10

SELECTED SAMPLE DISTRIBUTION

Level	Number of Subjects
I	1
II	4
III	6
IV	3
V	3
Learning Environment	**Number of Subjects**
I	5
II	5
III	4
IV	3

CHAPTER IV

THE DATA

LEARNING BEHAVIOR CATEGORY SYSTEM DEVELOPMENT

Since music educators are not usually trained behaviorists, it is important that efforts to explore teaching and learning employ the most effective use of technology in attempts to produce significant results. It is vital that educators, while recognizing their limitations in behavioral science, become more deeply involved in basic learning behavior research. Videotape recording techniques provide a valid means for developing systematic behavioral analysis procedures which are adaptable to a variety of learning environments.

Use of videotape techniques proved particularly useful for the instrument development phase of this study. Several models of the behavior category instrument were constructed and used during numerous observations of videotapes of learner behavior. Videotape permitted repeated inspection of specific behavioral samples, allowing for identification of the entire range of behavioral categories included

in the experimental instrument. The procedure also provided opportunity for the categories and subcategories to be inspected by other examiners. It seems unlikely that a reliable category system could have been established without this provision for repeated observations.

Initially, construction of the behavioral categories system was undertaken inductively; that is, beginning with no predetermined items and proceeding to the final system only through observation of actual behavioral occurrences. The first step was to view all preliminary videotape recordings of music learner activity, making notes on file cards of behaviors in evidence. The following comments are illustrative of those that were recorded:

> Student is standing, holding violin.
>
> Student plays exercise in response to instructor request.
>
> Student walks while playing.
>
> Student smiles and nods head while listening to instructor.
>
> Student interjects "I don't want to play now," directed to instructor.

After intensive tape viewing for information of this type, the cards were grouped according to similarity of the behaviors observed. There were two basic types of overt behavior in evidence--those that could be seen (nonverbal) and those that could be heard

(verbal and nonverbal). Therefore, the behaviors under study were 1) aural, 2) visual, or 3) a combination of aural and visual. Further detailed inspection of the unedited videotape recordings was made to identify all specific music performance learning behaviors that were considered for inclusion in the tentative category system.

With the tentative behavior category system completed, refinement of the system began. At this stage, interviews with authorities in allied disciplines were sought to further identify and classify observable behaviors and to determine appropriate terminology. Duplications within the category system were eliminated, allowing for minimum overlapping of subcategories. Of greater concern was the specific detail to be incorporated within each category, since it would be possible, for example, to devote an entire study to the learner's face alone. Even cursory examination of studies such as those by Birdwhistell on kinesics indicates the minute detail that might be employed in a total body-observation system. Preliminary objectives called for classification of every observable movement (no matter how insignificant), all sounds, and many attitudes as determined from facial expressions. It became apparent that the system was far too complex to control,

and that voluminous data derived from its use were irrelevant. Furthermore, any attempt to be absolutely comprehensive had to fall short of its goal. Therefore, many alternatives were devised and studied, and decisions about the final format were made.

The first decision was to return to the inductively derived observed behaviors structure that had developed out of initial tape screenings. The main groupings of behaviors were delineated from the numerous verbal and nonverbal behaviors: 1) verbal behaviors, 2) motor behaviors, and 3) attending behaviors. It seemed advisable to further subdivide motor behaviors to facilitate the later encoding process. These two categories were 1) motor behaviors which could be either performance or nonperformance directed, and 2) motor behaviors which were related to performance only. Incorporated under each of these four main category headings were the individual observed behaviors. In each case, subcategory listings developed into rather broad behavior indicators. For example, under "Verbal Behavior," many kinds of learner requests occurred. However, to achieve significant data, all types of request occurrences were able to be grouped together. Similarly, under "Visual Contact Directed to Instructor," many ancillary behaviors could have been considered, such

as eye movement left to right, blinking rate, and others. However, that kind of information would have had limited value for this project, though it might be of major importance in a study devoted to eye movement. There was a concentrated effort to devise a system that was simple to use; in spite of its simplicity, the system allowed for classification and identification of a wide range of behavior due to the broad limits of each behavioral item finally included.

The following table (Table 11) constitutes the final Observable Performance Learning Behavior Classification Index.

TABLE 11

OBSERVABLE PERFORMANCE LEARNING
BEHAVIOR CLASSIFICATION INDEX

TYPE I BEHAVIORS: VERBAL

A. Response Verbal Behaviors (Elicited)
    1. Directed to Instructor
    2. Directed to Another Student

B. Stimulus Verbal Behaviors (Emitted)
    1. Directed to Instructor
        a. Question
        b. Statement
        c. Interjection
    2. Directed to Another Student
        a. Question
        b. Statement
        c. Interjection

C. Nondirected Verbal Behaviors (Random)

TYPE IIA BEHAVIORS: MOTOR (Performance and Nonperformance Related)

A. Visual Contact
    1. Directed toward Instructor
    2. Directed toward Another Student
    3. Directed toward Music (Score) or Book
    4. Directed to Musical Instrument
    5. Other Directed
    6. Nondirected (Random)

B. Arm and Hand Movement
    1. Raised (Attention Seeking)
    2. Directed to Music (Score) or Book
    3. Directed to Musical Instrument
    4. Other Directed
    5. Nondirected (Random)

C. Fingers
    1. Directed to Musical Instrument
    2. Pointed to Printed Material
    3. Other Directed
    4. Nondirected (Random)

TABLE 11 (Continued)

D. Paralinguistic Facial Expression
    1. Positive (Pleasure)
    2. Negative (Displeasure)

E. Body (Trunk) Position
    1. Seated
    2. Standing
    3. Walking
        a. Directed
        b. Nondirected

TYPE IIB BEHAVIORS: MOTOR (Performance Related Only)

A. Response Performance Behaviors (Elicited)
    1. Performance Alone (Solo)
        a. Initial
        b. Subsequent (Adjustive Behaviors)
    2. Performance with Instructor
        a. Initial
        b. Subsequent (Adjustive Behaviors)
    3. Performance with Other Students
        a. Initial
        b. Subsequent (Adjustive Behaviors)

B. Stimulus Performance Behaviors (Emitted)
    1. Performance Alone (Solo)
    2. Performance with Instructor
    3. Performance with Other Students

TYPE III BEHAVIORS: ATTENDING (Nonverbal)

A. Listening to Aural Behaviors
    1. Listening Directed to Instructor While He:
        a. Verbalizes
        b. Performs
    2. Listening Directed to Other Student While He:
        a. Verbalizes
        b. Performs
    3. Listening Directed to Recorded Stimulus

B. Attendance to Instructor's Motor Behaviors (Nonperformance)

C. Attendance to Other Student's Motor Behaviors

D. Attendance to Nondirective Stimuli

DESCRIPTION OF THE LEARNING BEHAVIOR CATEGORIES

Type I Behaviors: Verbal

All verbal behaviors exhibited by the learner-subject are encoded within the Type I category. Three decisions must be made about the verbal behavior being exhibited: 1) the type of verbal activity it is (response or self-initiated), 2) the nature of any emitted behaviors (question, statement, or interjection), and 3) to whom the activity is directed. In the case of other verbal activity usually considered random or irrelevant (commonly known as "chatter," "noise," etc.) an additional category, "Nondirected Verbal Behaviors (Random)," is provided.

Type IIA Behaviors: Motor (Performance and Nonperformance Related)

This category does not include all motor behavior; it includes only certain motor behaviors, as its heading indicates. Together with the Type IIB category, this category forms a motor behavior unit. Those behaviors that constitute performance (resulting in aural phenomena) are excluded from category IIA.

Almost all observable motor behaviors basic to a music learning environment are incorporated into this category. Subcategories A, B, and C include a

wide range of possible forms that a particular behavioral occurrence may take. For example, a subject may move his head when changing the direction of his eyes from an instructor to a book, or he may move only his eyes while keeping his head stationary. No provisions are made for this distinction in the motor behavior subcategories, since the basic behavior is the same.

Only two subcategories are supplied under Subcategory D, "Paralinguistic Facial Expression." Although many attempts were made to expand this category, it was found that complete objectivity of identification and classification was not possible. It was assumed that the subject was exhibiting a neutral expression when the other two subcategories ("Positive/Negative") were not evident. Subcategory E, "Body Position," is quite straightforward. Indication of a subject's sitting or standing (Subcategory 1 or 2) is made only once, with further indication only if there is a change. Therefore, if a subject is seated and remains so throughout a ten-minute sequence, only one occurrence of this behavior is encoded.

Type IIB Behaviors: Motor (Performance Related Only)

This category pertains to musical performance.

As noted above, many behaviors work together to produce musical sounds--in fact, some are covert and thus not dealt with in this study at all. However, actual performance behaviors themselves are included in this category.

Two basic learner performance modes are considered: 1) those which are instructor-initiated (learner response), and 2) those which are learner-initiated (learner stimulus). The learner can perform alone, with the instructor, or with other students. When learner performance is instructor-initiated, it can be either as initial performance or as performance following instructor comments. Usually the learner employs adjustive behaviors in this subsequent performance, though as any teacher knows, this does not always occur.

Type III Behaviors: Attending (Nonverbal)

Attending behaviors are those behaviors which are linked to reception of information by a learner. The information being transmitted may be seen (nonverbal) or heard (verbal or nonverbal sounds) by the learner. Attention may be directed to a number of sources, with the instructor or other students being the most usual targets. In the music learning environment, the record or tape player provides another

important stimulus inviting the learner's attention. Specific occurrences of these attending behaviors must often be derived from other overt behavior clues. The most important of these clues is a Type IIA Behavior--"Visual Contact." For the purposes of this study, another important clue is the absence of other behaviors, since listening is a rather passive behavior, although only in terms of overt activity.

LEARNING BEHAVIOR DATA ENCODING PROCESS

Earlier in this chapter, development of the Music Performance Learning Behavior Category System was discussed. Underscoring that description was the idea that behaviors might be grouped into three major types--Type I: Verbal; Type II: Motor; and Type III: Attending. The subcategories for each of the above were structured inductively; that is, by a method of synthesis based on actual observation of videotaped sequences of learning behavior. Type II behaviors were subdivided in order to further identify distinct types of motor activities.

The music learning environments used in this study were described in detail and the seventeen learner subjects were identified in Chapter III. Two ten-minute videotape sequences for each of the seventeen subjects were prepared for analysis by means of

the learning behavior data encoding process. This encoding process was developed over the duration of the project through experimentation with a number of methods. Ultimately, valid procedures were formulated for the encoding process.

The equipment utilized for the encoding process included the following:

Videotape playback unit

Stopwatch

Prerecorded videotapes

Data collection instrument

The data collection instrument utilized an external grid providing cells indicating one-minute segments of the entire ten-minute sample. The instrument is shown in Table 12 on pages 62 and 63.

TABLE 12

OBSERVABLE PERFORMANCE LEARNING

BEHAVIOR CLASSIFICATION INDEX

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX SUBJECT NUMBER SEQUENCE A B

TYPE I BEHAVIORS: VERBAL

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR												
2. DIRECTED TO ANOTHER STUDENT												
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												
b. STATEMENT												
c. INTERJECTION												
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												
b. STATEMENT												
c. INTERJECTION												
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR												
2. DIRECTED TOWARD ANOTHER STUDENT												
3. DIRECTED TO MUSIC SCORE OR BOOK												
4. DIRECTED TO MUSICAL INSTRUMENT												
5. OTHER DIRECTED												
6. NONDIRECTED (RANDOM)												
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												
2. DIRECTED TO MUSIC SCORE OR BOOK												
3. DIRECTED TO MUSICAL INSTRUMENT												
4. OTHER DIRECTED												
5. NONDIRECTED (RANDOM)												
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT												
2. POINTED TO PRINTED MATERIAL												
3. OTHER DIRECTED												
4. NONDIRECTED (RANDOM)												
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)												
2. NEGATIVE (DISPLEASURE)												
E. BODY (TRUNK) POSITION												
1. SEATED												
2. STANDING												
3. WALKING												
a. DIRECTED												
b. NONDIRECTED												

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL												
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												
2. PERFORMANCE WITH INSTRUCTOR												
3. PERFORMANCE WITH OTHER STUDENTS												

TYPE III BEHAVIORS: ATTENDING (NONVERBAL)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES												
b. PERFORMS												
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												
b. PERFORMS												
3. LISTENING DIR. TO RECORDED STIMULUS												
B. ATTEND. TO INSTR. MOTOR BEHAVIOR												
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												
D. ATTENDANCE TO NONDIRECTIVE STIMULI												

The encoding procedures involved four steps: 1) identification of behaviors in each of the four behavioral categories, 2) classification of identified behaviors, 3) timing of occurrences within each behavioral category, and 4) documentation of information onto the data collection instrument. In order to accomplish these steps, it was necessary to view each ten-minute tape a minimum of seven times. Each behavioral category was examined separately; thus four replays were necessary for the first and second steps. Three of the four categories were subsequently examined in terms of elapsed time.

The reason for separate consideration of each behavioral category was to structure the encoding process. Since each category deals with homogeneous behaviors, the examiner was able to restrict his attention to one major type of behavior during each tape playthrough. Furthermore, the videotapes were replayed as often as necessary to assure inclusion of all behaviors being studied, and to correct possible classification or timing errors.

Each behavioral occurrence was recorded on the data form by means of a check mark in the appropriate lapsed time cell. After occurrences of specific behaviors had been recorded, the total duration of these occurrences was determined. A stopwatch

was started at the beginning of each behavioral occurrence and stopped at its conclusion. Similarly, the stopwatch was again started and stopped with each successive occurrence. It was therefore possible to arrive at the total time during which behaviors from each category were being exhibited. Timing added a valuable dimension to the encoding process, since the tabulation of occurrences became far more significant. To illustrate, twelve occurrences of a specific behavior lasting for a total of six minutes was quite different from twelve occurrences of that same behavior in evidence only fifty seconds. Note that timings were not made for Type IIA Behaviors; in each case, the timing result would have been ten minutes (100%), since finger contact with an instrument, visual activity, and trunk position are behaviors that occur throughout these tape sequences.

Tables 13 through 16 present the tabulation of identified overt music performance learning behaviors. Each subject's two ten-minute sequences are labeled "a" and "b." Table 17 gives the timing results. All project data-sheets are included in Appendix B for more detailed examination.

TABLE 13

TABULATION RESULTS OF TYPE I BEHAVIORS: VERBAL

Behaviors	Subject Number																	
	1		2		3		4		5		6		7		8		9	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
A. Response Verbal Behaviors (Elicited)																		
1. Directed to instructor	0	0	3	3	5	0	0	3	11	1	1	3	7	3	6	10	6	6
2. Directed to another student	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B. Stimulus Verbal Behaviors (Emitted)																		
1. Directed to instructor																		
a. Question	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
b. Statement	0	0	0	0	0	0	1	0	4	0	0	3	0	0	0	1	2	0
c. Interjection	0	0	1	0	0	0	0	0	1	0	0	2	0	0	0	1	1	0
2. Directed to another student																		
a. Question	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Statement	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1	1
c. Interjection	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
C. Nondirected Verbal Behaviors (Random)	0	0	0	0	0	0	0	0	0	0	0	0	2	4	0	0	0	0
Total	0	0	4	3	5	0	1	3	16	1	2	8	9	9	7	12	10	9

TABLE 13 (Continued)

TABULATION RESULTS OF TYPE I BEHAVIORS: VERBAL

Behaviors	Subject Number															
	10		11		12		13		14		15		16		17	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
A. Response Verbal Behaviors (Elicited)																
1. Directed to instructor	5	4	7	11	0	2	3	6	3	0	12	6	7	3	6	10
2. Directed to another student	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
B. Stimulus Verbal Behaviors (Emitted)																
1. Directed to instructor																
a. Question	0	1	1	4	0	1	0	0	0	0	4	4	1	1	4	2
b. Statement	2	3	4	8	0	3	0	0	0	0	7	5	7	1	3	1
c. Interjection	1	0	2	2	0	0	0	0	0	0	3	2	3	0	1	0
2. Directed to another student																
a. Question	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Statement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. Interjection	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. Nondirected Verbal Behaviors (Random)	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Total	8	8	14	25	0	6	3	7	3	0	26	17	19	5	14	13

TABLE 14

TABULATION RESULTS OF TYPE IIA BEHAVIORS: MOTOR

(PERFORMANCE AND NONPERFORMANCE RELATED)

Behaviors	1		2		3		4		5		6		7		8		9	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
A. Visual Contact																		
1. Directed toward instructor	17	25	14	7	19	18	21	19	13	8	2	4	14	8	21	6	9	10
2. Directed toward another student	0	0	0	0	1	0	12	16	2	0	0	0	10	1	4	2	1	6
3. Directed toward music (score) or book	0	0	0	0	0	0	12	10	7	7	3	5	5	2	0	0	10	7
4. Directed toward musical instrument	18	26	14	8	19	18	6	0	7	4	0	0	0	0	0	0	0	0
5. Other directed	0	1	2	1	1	0	0	0	0	0	0	0	0	2	18	2	1	0
6. Nondirected (random)	3	8	5	1	0	9	2	4	2	1	0	0	5	3	6	3	6	2
B. Arm and Hand Motions																		
1. Raised (attention seeking)	0	0	0	0	0	0	0	0	0	0	0	0	1	2	5	3	4	14
2. Directed to music (score) or book	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	4	0
3. Directed to musical instrument	3	1	4	2	3	3	4	2	6	10	1	2	0	0	6	0	0	0
4. Other directed	0	0	0	0	0	2	0	0	0	0	0	0	3	12	0	5	0	5
5. Nondirected (random)	2	0	3	1	2	0	1	0	5	9	0	1	3	6	6	8	0	2
C. Fingers																		
1. Directed to musical instrument	1	1	1	1	1	1	2	2	3	11	4	5	0	0	0	0	0	0
2. Pointed to printed material	0	0	0	0	0	0	0	0	3	0	2	1	0	0	0	0	1	1
3. Other directed	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0
4. Nondirected (random)	0	0	0	0	0	0	2	1	1	10	6	4	0	2	0	1	0	0

TABLE 14 (Continued)

TABULATION RESULTS OF TYPE IIA BEHAVIORS: MOTOR

(PERFORMANCE AND NONPERFORMANCE RELATED)

Behaviors	1		2		3		4		5		6		7		8		9	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
D. Paralinguistic Facial Expressions																		
1. Positive	3	1	6	6	4	1	8	1	0	4	3	11	5	0	1	2	4	9
2. Negative	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0
E. Body (Trunk) Position																		
1. Seated	0	0	0	0	0	0	1	1	0	1	1	2	1	1	1	1	1	3
2. Standing	1	1	5	1	1	3	0	0	2	0	0	0	0	0	0	0	0	3
3. Walking																		
a. Directed	0	0	2	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0
b. Nondirected	0	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total	48	64	59	28	51	57	73	58	54	66	22	36	42	47	71	34	41	62

TABLE 14 (Continued)

TABULATION RESULTS OF TYPE IIA BEHAVIORS: MOTOR

(PERFORMANCE AND NONPERFORMANCE RELATED)

Behaviors	10		11		12		13		14		15		16		17	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
A. Visual Contact																
1. Directed toward instructor	8	8	10	6	12	4	16	10	7	9	9	12	16	8	9	10
2. Directed toward another student	5	2	0	0	0	0	5	3	2	1	0	0	0	0	0	0
3. Directed toward music (score) or book	11	5	8	11	2	5	17	10	8	1	8	5	17	0	5	3
4. Directed toward musical instrument	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1
5. Other directed	1	0	0	3	2	2	0	1	0	3	0	0	0	2	0	1
6. Nondirected (random)	1	5	3	2	7	1	2	0	3	9	4	5	0	5	3	8
B. Arm and Hand Motions																
1. Raised (attention seeking)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2. Directed to music (score) or book	3	1	0	2	0	0	1	0	4	0	2	0	0	0	0	0
3. Directed to musical instrument	3	2	2	5	2	1	3	1	5	1	5	4	4	2	1	1
4. Other directed	1	1	0	3	1	0	0	0	2	0	0	0	1	1	0	0
5. Nondirected (random)	1	1	1	0	0	0	1	0	0	0	7	4	2	0	0	0
C. Fingers																
1. Directed to musical instrument	13	3	9	11	6	4	8	8	5	4	2	7	11	4	5	2
2. Pointed to printed material	1	3	0	3	0	1	0	1	0	0	1	0	1	0	2	0
3. Other directed	1	2	0	5	0	0	0	1	0	2	0	0	0	0	0	0
4. Nondirected (random)	12	2	8	3	5	3	7	8	5	1	0	6	10	4	3	1

TABLE 14 (Continued)

TABULATION RESULTS OF TYPE IIA BEHAVIORS: MOTOR

(PERFORMANCE AND NONPERFORMANCE RELATED)

Behaviors	10		11		12		13		14		15		16		17	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
D. Paralinguistic Facial Expressions																
1. Positive	2	0	0	0	1	1	0	1	1	1	3	3	7	0	3	5
2. Negative	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0
E. Body (Trunk) Position																
1. Seated	3	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1
2. Standing	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
3. Walking																
a. Directed	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
b. Nondirected	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	69	36	42	55	42	23	61	45	43	33	44	47	71	31	33	32

TABLE 15

TABULATION RESULTS OF TYPE IIB BEHAVIORS: MOTOR

(PERFORMANCE RELATED ONLY)

Behaviors	1		2		3		4		5		6		7		8		9	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
A. Response Performance Behaviors (Elicited)																		
1. Performance Alone (Solo)																		
a. Initial	1	1	3	2	3	2	3	2	7	6	4	6	0	0	1	0	0	0
b. Subsequent (adjustive behavior)	9	14	9	6	9	4	1	0	12	12	0	8	0	0	0	0	0	1
2. Performance with instructor																		
a. Initial	4	2	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0
b. Subsequent (adj. behav.)	16	11	7	4	7	1	0	0	2	0	0	0	1	0	0	0	0	0
3. Performance with other students																		
a. Initial	0	0	0	0	0	0	8	8	0	0	0	0	0	4	2	2	1	1
b. Subsequent (adj. behav.)	0	0	0	0	0	0	2	1	0	0	0	0	3	2	0	1	1	0
B. Stimulus Performance Behavior (Emitted)																		
1. Performance alone (solo)	0	0	0	0	4	1	0	0	7	5	2	0	0	0	0	0	0	0
2. Performance with instructor	0	0	0	0	0	0	0	0	1	0	0	0	2	1	2	1	1	0
3. Performance with other students	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	30	28	19	14	23	8	14	11	29	23	6	14	7	7	5	4	3	2

TABLE 15 (Continued)

TABULATION RESULTS OF TYPE IIB BEHAVIORS: MOTOR

(PERFORMANCE RELATED ONLY)

Behaviors	10		11		12		13		14		15		16		17	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
A. Response Performance Behaviors (Elicited)																
1. Performance alone (solo)																
a. Initial	2	1	9	5	8	6	1	2	0	3	6	5	3	7	8	10
b. Subsequent (adjustive behavior)	2	1	6	10	3	6	2	3	0	1	6	4	11	3	6	7
2. Performance with instructor																
a. Initial	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
b. Subsequent (adj. behavior)	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
3. Performance with other students																
a. Initial	4	5	0	0	0	0	7	7	9	8	0	0	0	0	0	0
b. Subsequent (adj. behavior)	11	7	0	0	0	0	8	6	6	4	0	0	0	0	0	0
B. Stimulus Performance Behavior (Emitted)																
1. Performance alone (solo)	0	0	0	1	0	0	1	0	2	0	1	0	2	0	0	1
2. Performance with instructor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3. Performance with other students	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	19	14	15	16	11	12	19	18	17	16	14	10	16	10	14	18

TABLE 16

TABULATION RESULTS OF TYPE III BEHAVIORS: ATTENDING

Behaviors	1		2		3		4		5		6		7		8		9	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
A. Listening to Aural Behaviors																		
1. Listening directed to instructor while he:																		
a. Verbalizes	12	21	20	8	11	15	15	11	15	19	7	16	13	11	10	13	13	16
b. Performs	10	6	10	3	4	10	3	0	14	16	6	2	6	6	3	3	2	5
2. Listening directed to other student while he:																		
a. Verbalizes	0	0	0	0	0	0	1	2	0	0	0	0	2	2	3	1	3	2
b. Performs	0	0	0	0	0	0	4	7	2	0	0	0	1	0	0	3	0	2
3. Listening directed to recorded stimulus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	7
B. Attendance to Instructor Motor Behavior (Nonperformance)	8	11	3	4	4	4	1	1	1	1	1	3	4	2	3	3	1	2
C. Attendance to Other Students' Motor Behavior	0	0	0	0	0	0	0	3	0	0	0	0	3	0	1	0	0	7
D. Attendance to Nondirected Stimulus	1	0	1	1	0	0	2	3	0	0	0	0	0	0	0	0	0	0
Total	31	38	34	16	19	29	26	27	32	36	14	21	29	21	20	24	20	41

TABLE 16 (Continued)

TABULATION RESULTS OF TYPE III BEHAVIORS: ATTENDING

Behaviors	10		11		12		13		14		15		16		17	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
A. Listening to Aural Behaviors																
1. Listening directed to instructor while he:																
a. Verbalizes	17	20	17	18	13	15	18	23	14	13	10	14	15	11	7	12
b. Performs	13	3	6	3	5	3	7	4	5	3	4	10	5	6	5	7
2. Listening directed to other student while he:																
a. Verbalizes	0	2	0	0	0	0	0	3	0	1	0	0	0	0	0	0
b. Performs	3	3	0	0	0	0	1	2	0	1	0	0	0	0	0	0
3. Listening directed to recorded stimulus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B. Attendance to Instructor Motor Behavior (Nonperformance)	1	2	0	3	1	1	0	1	0	1	2	2	0	2	2	0
C. Attendance to Other Students' Motor Behavior	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
D. Attendance to Nondirected Stimulus	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Total	35	30	23	24	19	20	27	33	19	19	16	26	20	19	14	19

TABLE 17

TIMING RESULTS OF THE BEHAVIORAL CATEGORIES

Subject Number		Type I Behaviors	Type IIA Behaviors	Type IIB Behaviors	Type III Behaviors
1	a	0'		7'07"	2'48"
	b	0'		6'14"	3'43"
2	a	0'05"	N	5'46"	3'54"
	b	0'06"	O	7'29"	1'43"
3	a	0'07"	T	6'33"	2'08"
	b	0'		4'54"	3'54"
4	a	0'10"	T	3'51"	5'04"
	b	0'04"	I	3'57"	5'07"
5	a	0'54"	M	5'28"	3'34"
	b	0'07"	E	5'30"	5'28"
6	a	0'10"	D	4'37"	5'12"
	b	0'32"		4'51"	3'46"
7	a	3'23"		1'32"	4'05"
	b	0'36"		4'32"	4'14"
8	a	0'38"		1'43"	5'21"
	b	2'38"		0'55"	5'14"
9	a	1'14"		3'35"	4'18"
	b	1'30"		1'24"	5'21"
10	a	0'17"		5'07"	2'28"
	b	0'55"		6'02"	3'28"
11	a	0'29"		7'02"	2'26"
	b	1'16"		5'46"	2'14"
12	a	0'		5'17"	4'12"
	b	0'15"		7'14"	2'12"
13	a	0'07"		6'19"	2'44"
	b	0'32"		5'43"	3'08"
14	a	0'17"		5'54"	2'51"
	b	0'		6'11"	2'43"

TABLE 17 (Continued)

TIMING RESULTS OF THE BEHAVIORAL CATEGORIES

Subject Number		Type I Behaviors	Type IIA Behaviors	Type IIB Behaviors	Type III Behaviors
15	a	2'05"		5'28"	2'56"
	b	1'42"		4'37"	5'36"
16	a	0'19"		4'39"	4'48"
	b	0'18"		4'02"	6'36"
17	a	1'15"		5'57"	4'04"
	b	1'23"		3'27"	4'29"

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

The current lack of objective data gathering techniques has often resulted in unsystematic, highly subjective observation and study of overt learning behavior. The present study was designed to develop a basic, objective approach to analysis of music learning behavior. Construction of the Learning Behavior Index, criteria for subject selection, and the development of the behavior encoding process used in this study were discussed in the first three chapters. Although a few cited studies included consideration of nonverbal behaviors, most previous research indicated primary concern with verbal activity. All observable music performance learning behaviors, ranging from verbal activity to attending behavior, were investigated in the present study. To restate the research objectives, the intent of this study was to identify music performance learning behaviors, and to develop an objective encoding and classification system. In order to accomplish these

goals, videotapes of seventeen music students were recorded; two ten-minute taped sequences of each were selected for detailed analysis. On the basis of this analysis, an inductively formulated classification index was devised, and the encoding process was utilized to record data about overt learning behavior. Maximum objectivity was possible since the examiner did not intrude on the learning environment. Rather, he was able to analyze "captured" learner behavior through the unlimited repetition capability afforded by means of videotape recording.

The data included in Chapter Four resulted from intensive analysis of the thirty-four ten-minute videotaped learning sequences. It was possible to identify and classify overt music performance learning behaviors through the use of the behavior index presented in Chapter Three. Furthermore, it was feasible to time behavioral occurrences to determine the precise amount of time during which each category of behavior was occurring. This procedure provided significant data heretofore unavailable in learning behavior research.

Through utilization of the procedures developed for this study it appears feasible to record and subsequently replay and study learning behavior. The devised videotape recording procedure allows for

maintenance of normalized student behavior while obtaining a permanent record for later in-depth analysis. The value of personal in-class observation on a "one shot" basis would appear seriously limited when compared to the video recording approach used in this study.

CONCLUSIONS

The data indicate two results of special significance: 1) the seventeen subjects exhibited relatively few occurrences of verbal behaviors, and 2) the subjects spent little class time verbalizing. Table 18 is a bar graph comparing the number of verbal behavior occurrences (Type I Behaviors) with the number of nonverbal behavior occurrences (combined Type IIA, Type IIB, and Type III Behaviors). Similarly, Table 19 compares the total elapsed time spent on nonverbal (excluding Type IIA) behaviors. This data supports the premise that research limited to the study of verbal behavior may not present a comprehensive view of the learner. Only three video sequences showed verbal activity present for more than two minutes of the ten-minute periods; in fact, most of the subjects (25 of 34) verbalized less than one minute.

A grand total of 266 occurrences of verbal

TABLE 18

NUMBER OF VERBAL (TYPE I) BEHAVIOR OCCURRENCES COMPARED TO
NUMBER OF NONVERBAL (TYPE IIA, IIB, AND III) BEHAVIOR OCCURRENCES

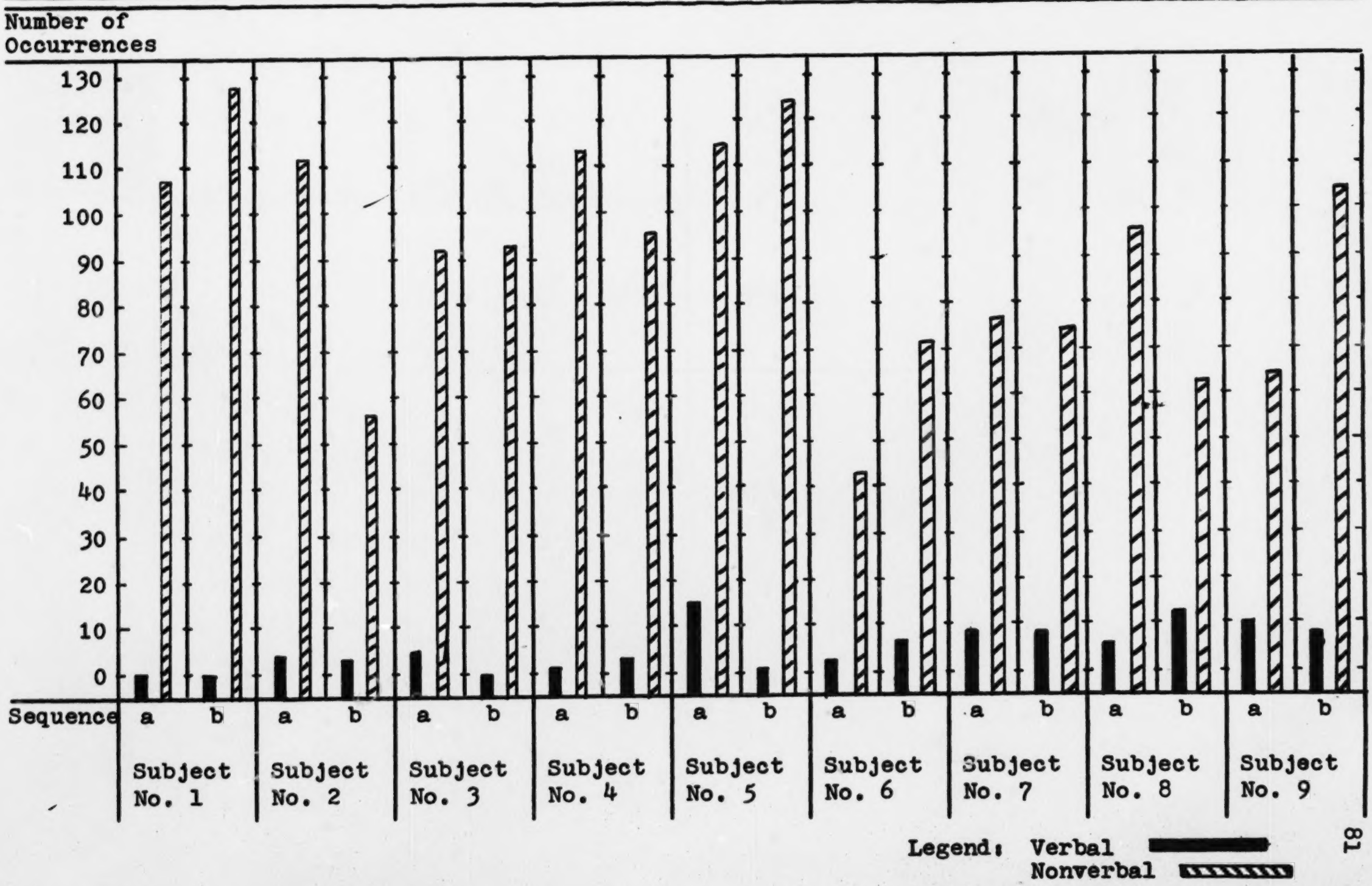


TABLE 18 (continued)

NUMBER OF VERBAL (TYPE I) BEHAVIOR OCCURRENCES COMPARED TO
NUMBER OF NONVERBAL (TYPE IIA, IIB, AND III) BEHAVIOR OCCURRENCES

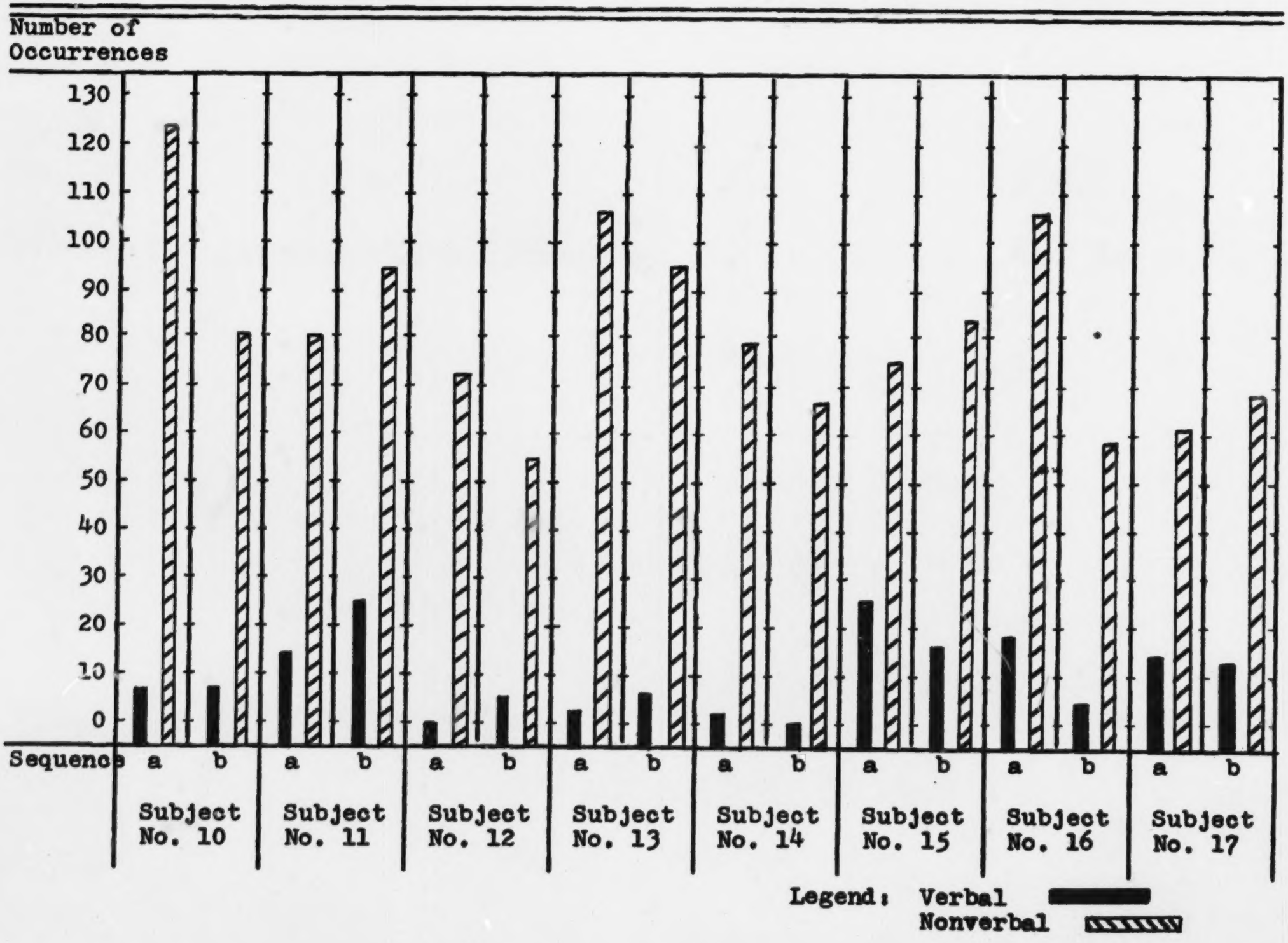


TABLE 19

TIMINGS OF VERBAL (TYPE I) BEHAVIORS COMPARED TO
TIMINGS OF NONVERBAL (TYPE IIB AND III) BEHAVIORS

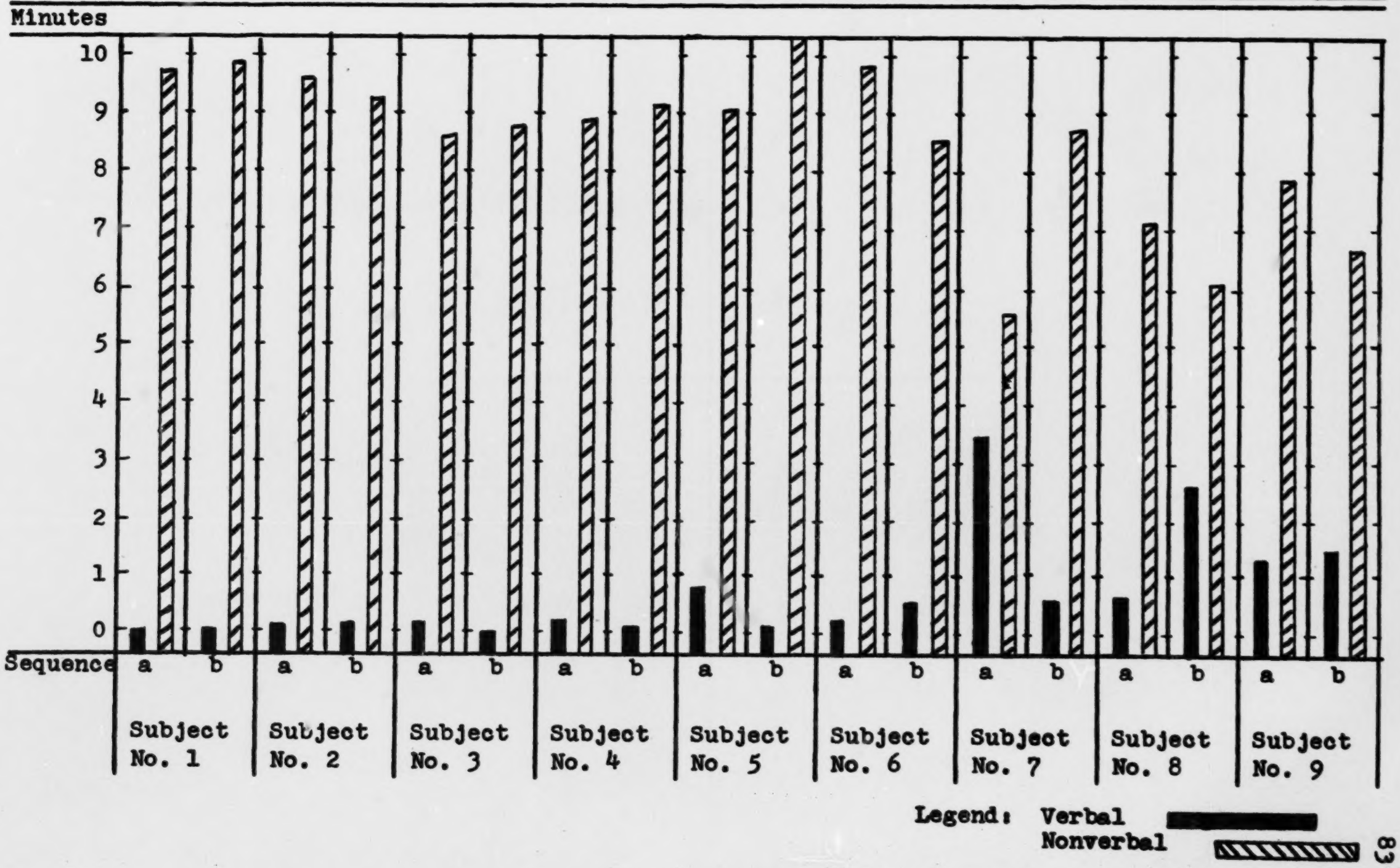
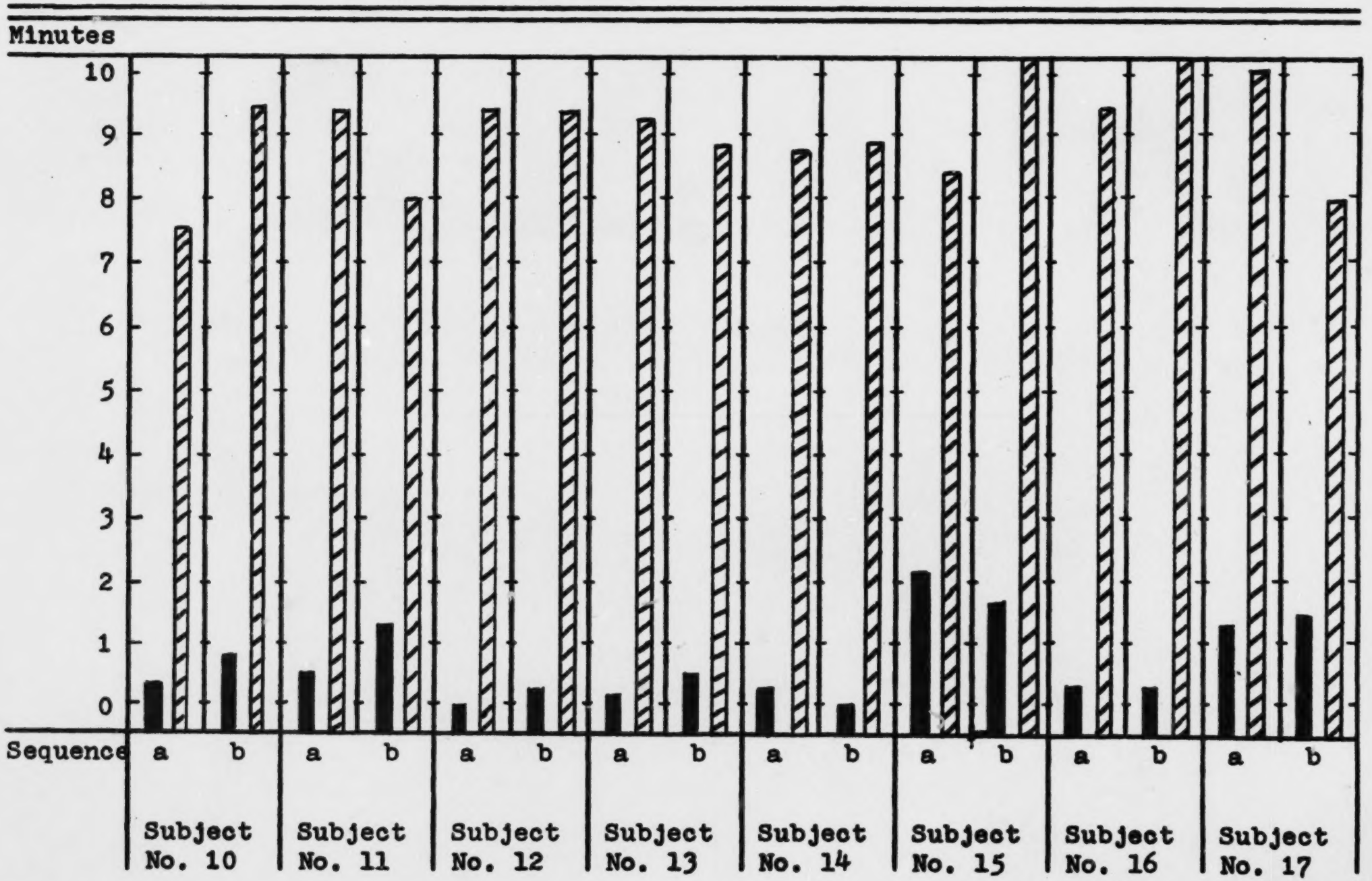


TABLE 19 (continued)

TIMINGS OF VERBAL (TYPE I) BEHAVIORS COMPARED TO
TIMINGS OF NONVERBAL (TYPE IIB AND III) BEHAVIORS



behavior were exhibited by the seventeen subjects during their thirty-four ten-minute tape sequences. Of that number, 57.5 percent (154 occurrences) were response behaviors directed to the instructor. Another 20.7 percent (55 occurrences) were learner-initiated statements directed to the instructor; 9.4 percent (25 occurrences) were learner-initiated questions directed to the instructor; and 7.5 percent (20 occurrences) learner-initiated interjective comments directed to the instructor. All remaining occurrences of verbal behavior accounted for only 4.9 percent of the total. The subjects were initiators of verbal activity less than 45 percent of the time. Of that 45 percent, less than 21 percent was activity or a dominant nature (statement behavior as opposed to questioning). A possible reason for approximately 96 percent of all verbal behaviors having been directed to the instructor may be attributable to the nature of the learning environments under investigation.

There appears to be a positive correlation between student-initiated verbal behavior directed to the instructor, and age level. Table 20 indicates this correlation in terms of the number of learner-initiated verbal behavior occurrences.

TABLE 20

CORRELATION OF SUBJECT-INITIATED VERBAL BEHAVIOR AND AGE LEVEL

Sub. No. (Both sequences combined for each)	Level	Combined Stimulus Verbal Behavior Occurrences
1 a & b	I	0
2 a & b	II	1
3 a & b	II	0
7 a & b	II	0
8 a & b	II	2
4 a & b	III	1
5 a & b	III	5
6 a & b	III	6
9 a & b	III	4
10 a & b	III	7
11 a & b	III	20
12 a & b	IV	4
13 a & b	IV	0
14 a & b	IV	0
15 a & b	V	25
16 a & b	V	13
17 a & b	V	11

The number of occurrences increases with age level; subjects 11, 13, and 14 are the exceptions.

The total combined number of Type IIA behavior occurrences in the thirty-four videotape sequences was 1620. Since this category included the largest number of subcategories, it is not inappropriate for the occurrence tabulation figure to be high. The data support the contention that there is a complex of behavior in evidence at any given moment. It was possible to inspect these nonverbal behaviors in precise detail by means of repeated analysis of the video recording.

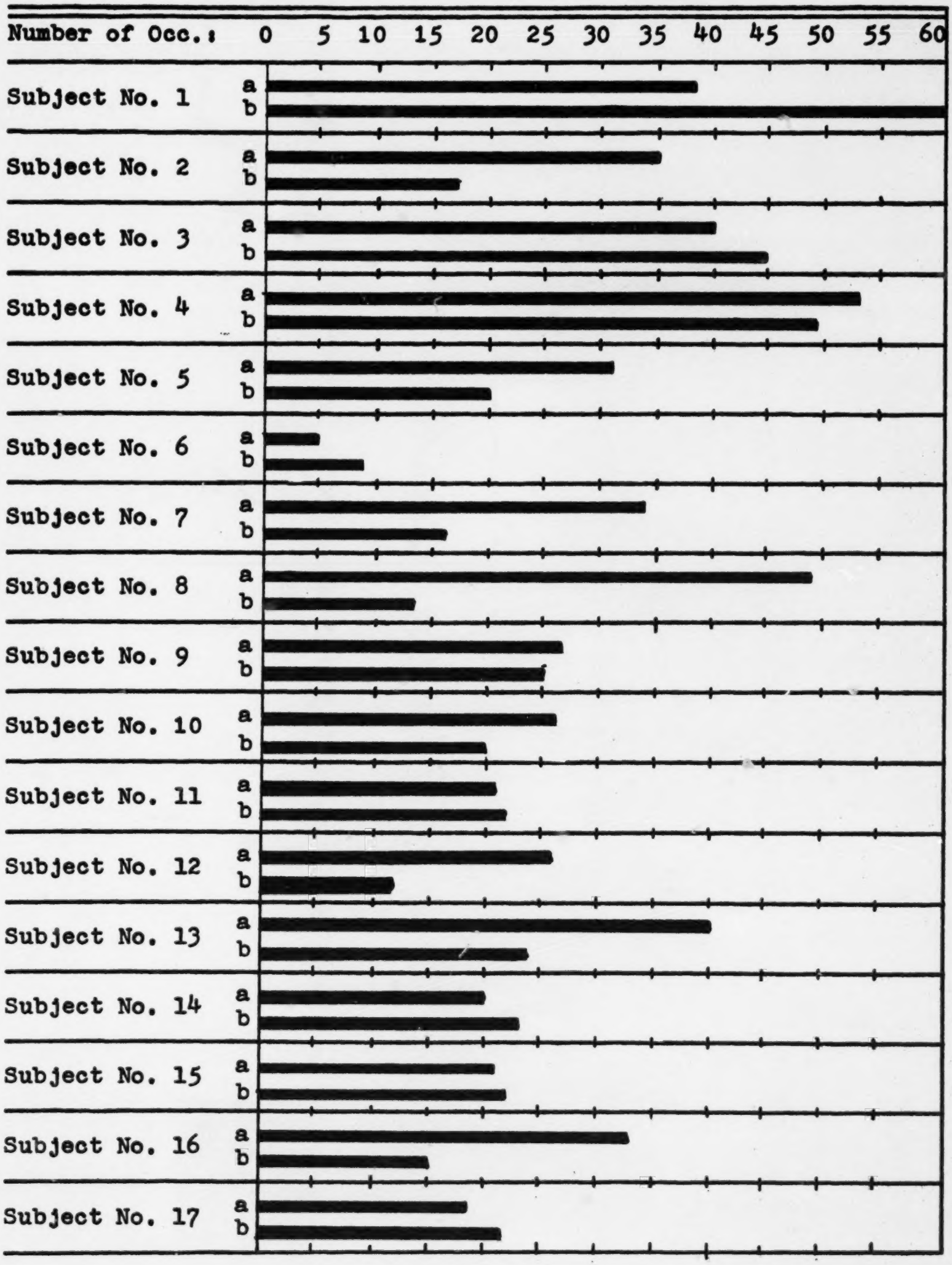
Type IIA subcategories indicating the greater number of behavioral occurrences (again, a composite of all seventeen subjects' taped sequences) were 1) visual contact directed to the instructor (389 occurrences), 2) visual contact directed toward a music score or book (184 occurrences), 3) fingers directed to a musical instrument (135 occurrences), and 4) visual contact directed toward a musical instrument (124 occurrences).

In general, the subjects exhibited a great deal of visual activity while in their learning environments. The number of occurrences indicates the number of shifts of direction in visual behavior. As stated previously in this chapter, timing of this subcategory would have in each case produced a result

of ten, or nearly ten, minutes since visual contact with a number of stimuli was present nearly 100 percent of the time. The high number of occurrences reflects frequent shifts of visual direction, while a low number of occurrences reflects extended visual response toward a single stimulus. The high rate of visual shift indicated in Table 21 reflects a high level of visual response to a number of stimuli present in any learning environment.

TABLE 21

NUMBER OF TYPE IIA VISUAL CONTACT OCCURRENCES
(Subcategories A1-A6 for Each Subject)



The significance of Type IIB behavior is apparent from the extent of elapsed time involved in student performance. Table 22 indicates the amount of time spent by each subject in performance. A ratio (expressed as a percentage) is given which details the relationship of performance time to ten minutes.

An important finding of this study is the relationship between the total number of initial performance behavior occurrences compared to subsequent performance behavior occurrences. A disproportionately large number of subsequent performance occurrences might be expected, since it is assumed most instructors stop students frequently to make corrections and suggestions. This would be followed by the student replaying their selection, incorporating the recommendations. On the contrary, of the 451 response performance occurrences exhibited by the seventeen subjects, 258 were classified as "subsequent" performance. The data clearly show that students seldom repeat a selection or exercise more than once.

"Attending" behaviors proved to be very important in the study of the learner. These behaviors constituted a sizeable portion of the learning sequence time. Few previous research studies have

TABLE 22

PERFORMANCE BEHAVIOR TIMING RESULTS
RELATED TO TEN-MINUTE TIME SPAN

Number of Minutes:		1 2 3 4 5 6 7 8 9 10	Ratio
Subject No. 1	a		71%
	b		62%
Subject No. 2	a		58%
	b		75%
Subject No. 3	a		66%
	b		49%
Subject No. 4	a		39%
	b		40%
Subject No. 5	a		55%
	b		55%
Subject No. 6	a		46%
	b		49%
Subject No. 7	a		15%
	b		45%
Subject No. 8	a		17%
	b		9%
Subject No. 9	a		36%
	b		14%
Subject No. 10	a		51%
	b		60%
Subject No. 11	a		70%
	b		58%
Subject No. 12	a		53%
	b		72%
Subject No. 13	a		63%
	b		57%
Subject No. 14	a		59%
	b		62%
Subject No. 15	a		55%
	b		46%
Subject No. 16	a		47%
	b		40%
Subject No. 17	a		60%
	b		35%

dealt with attending behavior as an overt phenomenon. Analyses of video recordings indicated many overt manifestations of attending behaviors. There were 841 occurrences of attending behaviors; similar to behaviors previously discussed, nearly 90 percent of these (756 occurrences) were responses to the instructor's verbal, performance, or motor behaviors.

During the encoding phase of the present study it was found that, in general, data from the second videotaped sequences for each subject varied only slightly from the first. This is a further indication of the validity of behavioral data collection by means of video recording. This is particularly significant due to the time lapse between videotaping sessions.

During the course of the project, only one major problem was encountered. Category IIA (Motor Behavior: Performance and Nonperformance Related) proved to include too many subcategories to allow for efficient encoding. Although it was possible to identify and classify the wide variety of motor behaviors, further subdivisions of this category would reduce the number of viewings required to obtain the data.

RECOMMENDATIONS

The implications of the present study are numerous. Many facets of the overt music learning act that have traditionally received little or no attention were successfully identified and categorized. It therefore becomes feasible to further investigate the music learner, using the present study as a point of reference. It may be found that much of what is presently considered essential in the learning environment actually impedes learning opportunities. A possible means of gathering more data to support such a view is to undertake a longitudinal study (over a period of at least one year) of a small number of learners. This could lead to information pertinent to questions about short and long range behavior modification, behavior adaptation, and the extent of control over the learner exerted by outside influences. Many interesting speculations can be raised on the basis of data reported in the present study. Perhaps subsequent research devoted to the learner alone can confirm or reject the speculative hypotheses. In any event, the present study has provided a necessary and important first step in the

development of approaches to the study of the music learner.

In-service teacher training could benefit from utilization of the techniques developed over the course of this project. Model behavior could be provided through the medium of videotape for detailed examination and analysis. By taking advantage of current advances in technology, optimum use of classroom time can be achieved as a result of an increase in efficiency. Some of these advances aiding the study of learning behavior are stop-motion videotape playback, high quality inexpensive microphones, multiple video camera capability for thorough subject coverage, zoom and wide-angle lenses, and electronic editing features for tailoring videotapes to meet specific course requirements. There is a need for special classrooms to be set up as laboratories geared to carry out informal behavioral investigation and small research training projects, as well as major studies.

The recommendation for in-depth, long-term study of the music teaching-learning interaction process is supported by this study. Previous research into music teaching behaviors by the present writer, coupled to the present study investigating music learning behaviors, provide a unified fundamental

approach to the study of verbal and nonverbal interaction. The present study was designed to consider the behavior of learners separate from specific teacher behavior; in spite of this, interaction was implied throughout from the kind of behaviors in evidence--response ("to instructor" implied) or self-initiated behaviors. It is important to continue one step further to consider instructor activity in relation to the response elicited from the learner, and the reverse of this. The results of that interaction would then be available for detailed analysis: Stimulus ⟶ Response ⟷ Consequence.

An expansion of the existing categories is called for to include indicators of behavior effectiveness, and climate (attitude) considerations. Both of these behavioral characteristics require intensive research to develop valid measures, since well-constructed methods for analysis are not currently available. Conventional methods linked with the procedures detailed in the present study may ultimately lead to systems usable in the analysis of teacher effectiveness. Behaviors reflecting classroom climate related to both teacher and learner will be more difficult to analyze. Probable procedures will include not only conventional methods and the newly-developed procedures, but personal interviews

and consultation with secondary sources.

Finally, little is actually known about the teacher's influence on learner concept formation. It appears increasingly important to examine this critical music teacher-music learner relationship. The present study represents important progress toward the goal of qualitative analysis of teaching and learning. We may be approaching a time when it will be possible to interpret behaviors in terms of behavioral prediction. Subsequently, once behaviors are more fully understood, valid instructional strategies can be based on behavioral prescription rather than on random uncontrolled suspicions of outcomes.

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APPENDIX A

BEHAVICRAL DATA DERIVED FROM DAELLENBACH'S 1968 STUDY OF MUSIC TEACHERS

Appendix A,1

THE TWELVE SUBJECTS IDENTIFIED

Subject	Location	Situation	Type	Date
1	Bishop Kearney High School	Small Group	Wind	6/06/67
2	Greece Olympia Public Schools	Large Group	Wind and Percussion	6/07/67
3	Eastman School of Music	Large Group	Conducting Techniques	11/21/67
4	Rochester City School #39	Large Group	Vocal	5/08/67
5	Brookside Elementary School	Studio	Percussion	10/31/67
6	Rochester City School #27	Small Group	Wind	11/20/67
7	Rochester City School #46	Small Group	String	6/14/67
8	Irondequoit Central Schools	Large Group	Wind and Percussion	6/07/67
9	Eastman School of Music	Studio	String	9/30/67
10	Brasser Elementary School	Large Group	Vocal	5/01/67
11	Rochester City School #39	Large Group	Vocal	5/08/67
12	Rochester City School #27	Small Group	Wind	4/10/67

Source: C. C. Daellenbach, "An Investigation of the Use of Videotape Recorder Techniques in the Identification of Behavioral Characteristics of Music Teachers." Unpub. Masters Thesis, University of Rochester's Eastman School of Music, June, 1968.

Appendix A,2

TABULATION RESULTS OF VERBAL BEHAVIORS

Behaviors	Subject Number											
	1	2	3	4	5	6	7	8	9	10	11	12
Directions or Instructions	37	13	21	21	34	34	29	32	25	18	12	31
Information or Teaching	15	8	21	12	16	25	21	7	27	19	8	13
Positive Reinforcement	5	3	3	9	9	9	13	10	18	10	2	10
Negative Reinforcement	7	2	0	2	3	2	0	1	0	0	1	6
Questioning	9	4	16	10	7	14	9	6	15	8	5	16
Disciplinary Comments	2	0	1	1	0	0	0	0	0	0	0	0
Mannerisitic Word or Phrase	0	9	0	10	16	0	5	26	19	0	0	0
Total	75	39	62	65	85	84	77	82	104	55	28	76

TABULATION RESULTS OF NONVERBAL BEHAVIORS

Behaviors	Subject Number											
	1	2	3	4	5	6	7	8	9	10	11	12
Directed Motor Behavior	18	8	17	13	22	17	19	14	19	29	20	10
Nondirected Motor Behavior	3	5	14	3	5	25	24	0	2	9	10	7
Random or Impromptu Mannerisms	1	6	6	0	2	6	2	4	2	3	0	1
Patterned Mannerisms	6	7	6	0	0	0	0	0	8	0	0	3
Concentrated Listening	14	0	7	0	24	10	23	6	0	1	1	5
Total	42	26	50	16	53	58	68	24	31	42	31	26

Source: Daellenbach, "An Investigation of the Use of Videotape Recorder Techniques in the Identification of Behavioral Characteristics of Music Teachers," 1968.

Appendix A,3

TABULATION RESULTS OF CONDUCTING BEHAVIORS

Behaviors	Subject Number											
	1	2	3	4	5	6	7	8	9	10	11	12
One-hand (patterns, tempo)	37	15	0	12	0	20	0	24	0	0	0	15
One-hand (interpretations)	6	9	0	0	0	0	0	1	0	0	0	1
Two-hand (patterns, tempo)	1	20	0	0	0	0	0	31	0	0	0	0
Two-hand (interpretations)	0	1	0	0	0	0	0	0	0	0	0	0
Total	44	45	0	12	0	20	0	56	0	0	0	16

TABULATION RESULTS OF MODEL BEHAVIORS

Behaviors	Subject Number											
	1	2	3	4	5	6	7	8	9	10	11	12
Playing (alone--solo model)	1	0	0	5	17	3	8	0	0	0	3	0
Singing (alone--solo model)	6	2	0	3	0	2	4	4	0	0	1	5
Playing (with student)	0	0	2	1	1	8	0	0	0	0	4	0
Singing (with student)	7	0	0	22	0	3	0	1	0	4	1	16
Baton or Implement Tapping	0	0	0	0	0	0	0	0	0	0	0	0
Foot Beating	0	0	0	0	0	4	0	1	0	0	0	0
Clapping	0	0	0	0	0	0	1	1	17	0	0	9
Total	14	2	2	31	18	20	13	7	17	4	9	30

Source: Daellenbach, "An Investigation of the Use of Videotape Recorder Techniques in the Identification of Behavioral Characteristics of Music Teachers," 1968.

Appendix A,4

TIMING RESULTS OF THE BEHAVIORAL CATEGORIES*

Subject Number	Verbal Behaviors	Nonverbal Behaviors	Conducting Behaviors	Model Behaviors
1	5' 15"	1' 35"	2' 30"	20"
2	3' 00"	2' 40"	7' 10"	03"
3	3' 35"	5' 25"	0	1' 45"
4	5' 35"	1' 40"	4' 25"	2' 25"
5	4' 35"	4' 40"	0	1' 45"
6	4' 45"	2' 55"	1' 10"	3' 05"
7	4' 30"	5' 50"	0	55"
8	4' 05"	1' 35"	6' 25"	25"
9	8' 10"	2' 40"	0	3' 05"
10	3' 15"	4' 10"	0	1' 25"
11	4' 45"	3' 40"	0	4' 50"
12	4' 35"	2' 10"	1' 55"	4' 45"

*The symbol (') denotes "minute;" the symbol (") denotes "second."

Source: Daellenbach, "An Investigation of the Use of Videotape Recorder Techniques in the Identification of Behavioral Characteristics of Music Teachers," 1968.

APPENDIX B

THE SEVENTEEN SUBJECTS' ENCODED DATA INDICES

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 1 SEQUENCE (A) B

TYPE I BEHAVIORS: VERBAL 0''

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR												0
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	1	1	1	1	1	1	1	1	1	1	1	17
2. DIRECTED TOWARD ANOTHER STUDENT												0
3. DIRECTED TO MUSIC SCORE OR BOOK												0
4 DIRECTED TO MUSICAL INSTRUMENT	1	1	1	1	1	1	1	1	1	1	1	18
5 OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)	1			1			1					3
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT	1		1				1					3
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)		1					1					2
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	1											1
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)												0
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)					1		1	1				3
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED												0
2. STANDING	1											1
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 7'07

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL							1					1
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)	1		1 1	1	11		1	1	1			9
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL	1	1 1		1								4
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)	1 1 1	1 1	1 1	1	1	1 1	1	1	1	1		16
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 2'48"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	1 1 1		1 1	1 1		1	11	1		1		12
b. PERFORMS	1 1	1		1	1	1 1		1	1	1		10
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR		1		1	11	1	1	1 1				8
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI							1					1

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX — SUBJECT NUMBER 1 — SEQUENCE A (B)

TYPE I BEHAVIORS: VERBAL

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR												0
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	|||	|||	|||	|||	||			|||	|||	||	25
2. DIRECTED TOWARD ANOTHER STUDENT												6
3. DIRECTED TO MUSIC SCORE OR BOOK												0
4. DIRECTED TO MUSICAL INSTRUMENT	|||	|||	|||	|||			||			|||	|||	46
5. OTHER DIRECTED												1
6. NONDIRECTED (RANDOM)												8
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT												1
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)												0
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT												1
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)												0
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)												1
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED												0
2. STANDING												1
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 6 14

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL								1				1
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)		1	1		111	1	1	1	111	1	11	14
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL				1				1				2
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)	111		1	1	1	11	1	1				11
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 3'43"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS	0											
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	1	11	1	11		11	111	1	111	111		21
b. PERFORMS			1	11		1	1	11	1			6
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR	1	111				1	1	1	11	11		11
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX — SUBJECT NUMBER 2 — SEQUENCE (A) B

TYPE I BEHAVIORS: VERBAL 05"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR			1				1	1				3
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION			1									1
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												6

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR			1	1	1 1	1	1	1 1	1 1 1	1 1	1	14
2. DIRECTED TOWARD ANOTHER STUDENT												0
3. DIRECTED TO MUSIC SCORE OR BOOK												6
4. DIRECTED TO MUSICAL INSTRUMENT	1 1	1	1	1	1	1 1	1	1	1	1 1 1	1	14
5. OTHER DIRECTED		1								1		2
6. NONDIRECTED (RANDOM)	1	1		1 1							1	5
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT	1							1 1		1		4
4 OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)								1 1		1		3
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	1											1
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)												0
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)		1 1		1			1		1	1		6
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED												0
2. STANDING	1		1	1	1		1					5
3. WALKING												
a. DIRECTED		1			1							2
b. NONDIRECTED		1		1			1					3

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 5'46"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL	|		|	|								3
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)			|		| |	|	|		| |			9
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)			|	|			| |	|		|	7
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 3'54"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES		| |	| | |	| |	| |	| |	| |	| |	| |	|		20
b. PERFORMS		|				| |						10
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS												6
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR						|		|		|	3
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI				|								1

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX — SUBJECT NUMBER 2 — SEQUENCE A (B)

TYPE I BEHAVIORS: VERBAL 6"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR						| | |					3
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR			|	| |	|	| |			|		7
2. DIRECTED TOWARD ANOTHER STUDENT												0
3. DIRECTED TO MUSIC SCORE OR BOOK												0
4. DIRECTED TO MUSICAL INSTRUMENT	|		|	| |		| | |			|		8
5. OTHER DIRECTED											|	1
6. NONDIRECTED (RANDOM)			|									1
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT	|				|							2
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)					|							1
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	|											1
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)												0
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)		| |		|		|			| |		6
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED												0
2. STANDING	|											1
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

2B

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 7'29"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL		I			I							2
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)			I I	I				I	I	I		6
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL	I I											2
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)			I			I		I		I		4
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 1'43"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	I	I		I	I	I			I I	I		8
b. PERFORMS	I	I										3
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR	I	I		I		I						4
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI			I									1

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 3 SEQUENCE (A) B

TYPE I BEHAVIORS: VERBAL 7"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR	1		1			11			1			5
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	1	1	1	1	1	1	1	1	1	1	1	19
2. DIRECTED TOWARD ANOTHER STUDENT					1							1
3. DIRECTED TO MUSIC SCORE OR BOOK												0
4. DIRECTED TO MUSICAL INSTRUMENT	1	1	1	1	1	1	1	1	1	1	1	19
5. OTHER DIRECTED	1											1
6. NONDIRECTED (RANDOM)												0
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT	1					1			1			3
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)						1			1			2
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	1											1
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)												0
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)				1		1	1			1		4
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED												0
2. STANDING	1											1
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 6'33"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												3
a. INITIAL	|						|		|		9
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)				|	| |	| |		|	|		
2. PERFORMANCE WITH INSTRUCTOR												0
a. INITIAL												7
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)				|	| |	|		|	|	|		
3. PERFORMANCE WITH OTHER STUDENTS												0
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												4
1. PERFORMANCE ALONE (SOLO)	|		| |						|		0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 2'08

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:	|		|	| |	| |	| |	| |	|		|	|		11
a. VERBALIZES												4
b. PERFORMS				|	|			|		|		
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												0
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												4
B. ATTEND. TO INSTR. MOTOR BEHAVIOR	|		|					|		|		0
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												

3

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX SUBJECT NUMBER 3 SEQUENCE A (B)

TYPE I BEHAVIORS: VERBAL

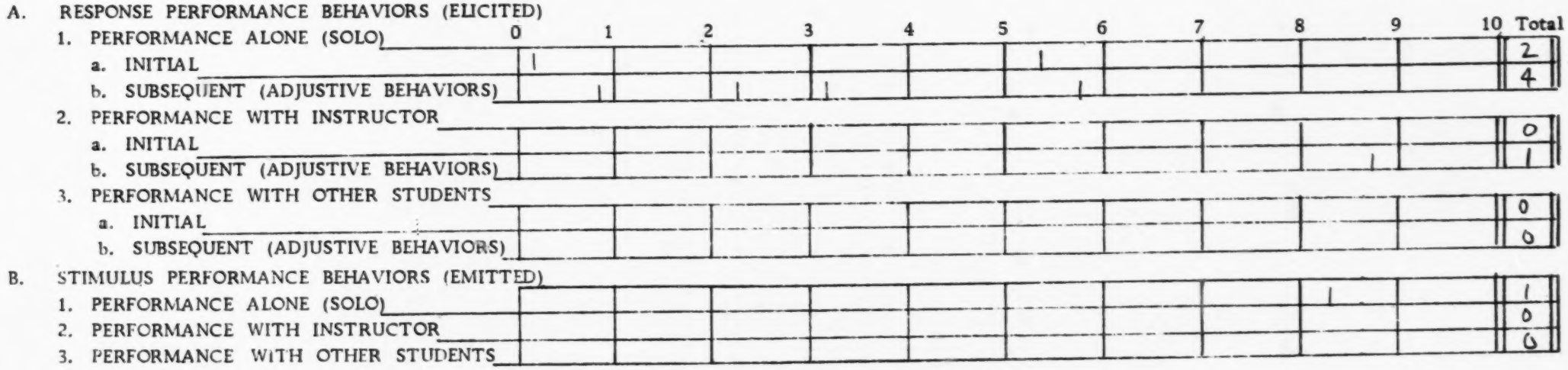
	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR												0
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

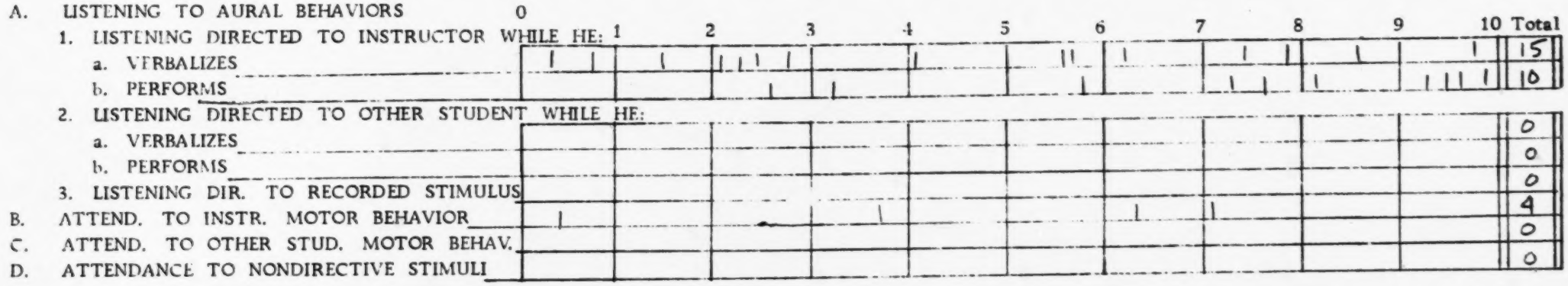
	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR												18
2. DIRECTED TOWARD ANOTHER STUDENT												0
3. DIRECTED TO MUSIC SCORE OR BOOK												0
4. DIRECTED TO MUSICAL INSTRUMENT												18
5. OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)												9
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT												3
4. OTHER DIRECTED												2
5. NONDIRECTED (RANDOM)												0
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT												1
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)												0
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)												1
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED												0
2. STANDING												3
3. WALKING												
a. DIRECTED												1
b. NONDIRECTED												1

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 4'54"



TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 3'54"



OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 4 SEQUENCE (A) B

TYPE I BEHAVIORS: VERBAL 10"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR												0
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT					1							1
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR												21
2. DIRECTED TOWARD ANOTHER STUDENT												12
3. DIRECTED TO MUSIC SCORE OR BOOK												12
4. DIRECTED TO MUSICAL INSTRUMENT												6
5. OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)												2
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												2
3. DIRECTED TO MUSICAL INSTRUMENT												4
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)												1
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT												2
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)												2
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)												8
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED												1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 3'51"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)			|	|			|	|				3
a. INITIAL												1
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)							|					
2. PERFORMANCE WITH INSTRUCTOR												6
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												
3. PERFORMANCE WITH OTHER STUDENTS		| |	|	|		| |	|						8
a. INITIAL												2
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)			|			|						
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												0
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 5'04"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:		| | |	| | |		|	|	|	| |	|	|	|	15
a. VERBALIZES												3
b. PERFORMS						|					
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												1
a. VERBALIZES			|									4
b. PERFORMS				|				|	|	|		6
3. LISTENING DIR. TO RECORDED STIMULUS												1
B. ATTEND. TO INSTR. MOTOR BEHAVIOR				|							0
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												2
D. ATTENDANCE TO NONDIRECTIVE STIMULI									|	|		

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX — SUBJECT NUMBER 4 — SEQUENCE A (B)

TYPE I BEHAVIORS: VERBAL

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR						III						3
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR												19
2. DIRECTED TOWARD ANOTHER STUDENT												16
3. DIRECTED TO MUSIC SCORE OR BOOK												10
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)												4
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												6
2. DIRECTED TO MUSIC SCORE OR BOOK												2
3. DIRECTED TO MUSICAL INSTRUMENT												2
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)												0
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT												2
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)												1
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)												1
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED												1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 3'57"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL									11			2
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL		1			1		1	1	1	11	1	8
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)								1				1
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 5'07"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES		1 1	1	1 1	1	1	1	1		1		11
b. PERFORMS												0
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES						1 1						2
b. PERFORMS			1 1 1	1	1				1	1		7
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR								1				1
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.	1						1				1	3
D. ATTENDANCE TO NONDIRECTIVE STIMULI		1			1					1		3

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 5 SEQUENCE (A) B

TYPE I BEHAVIORS: VERBAL 54

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR				11	1	11		1		111		11
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												0
a. QUESTION				1		1			1		1	4
b. STATEMENT						1						1
c. INTERJECTION												
2. DIRECTED TO ANOTHER STUDENT												0
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	111	1	1	1	1	11	1	1	1	1		13
2. DIRECTED TOWARD ANOTHER STUDENT			11									2
3. DIRECTED TO MUSIC SCORE OR BOOK				1	1	1	1	1	1			7
4. DIRECTED TO MUSICAL INSTRUMENT	111	1	1				11	1				7
5. OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)			1							1		2
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)									1	1		0
2. DIRECTED TO MUSIC SCORE OR BOOK				1	1	1	1	1	1	1		2
3. DIRECTED TO MUSICAL INSTRUMENT	1											6
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)			1	1	1	1				1		5
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	1								1	1		3
2. POINTED TO PRINTED MATERIAL									1	11		3
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)										1		1
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)												0
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED												0
2. STANDING	1							1				2
3. WALKING												
a. DIRECTED								1				1
b. NONDIRECTED												0

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 5' 28"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL				1	1	11			1	11		7
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)		11	1		1	111	1	11	1			12
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)	1						1					2
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)	11	11	1				1	1				7
2. PERFORMANCE WITH INSTRUCTOR								1				1
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 3' 34"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	1		1	1	11	1	11	1	1	111	1	15
b. PERFORMS	111	1111	1				1	1	1		1	14
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS			11									2
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR								1				1
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 5 SEQUENCE A (B)

TYPE I BEHAVIORS: VERBAL

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR												1
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR		1	1	1			1	1	1	1		8
2. DIRECTED TOWARD ANOTHER STUDENT												0
3. DIRECTED TO MUSIC SCORE OR BOOK	1 1	1		1	1 1					1		7
4. DIRECTED TO MUSICAL INSTRUMENT	1						1	1	1			4
5. OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)					1							1
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT	1 1	1		1	1	1	1	1	1	1		10
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)	1	1	1	1			1	1	1	1		9
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	1 1	1			1	1		1	1	1	1	11
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)	1	1	1	1	1		1	1	1	1		10
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)	1	1	1					1				4
2. NEGATIVE (DISPLEASURE)						1						1
E. BODY (TRUNK) POSITION												
1. SEATED	1											1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 5'30"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)		1			1			1	1	1		6
a. INITIAL		1										1
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)		1	1	1		1111	1		11			12
2. PERFORMANCE WITH INSTRUCTOR												0
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												0
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)											111	5
1. PERFORMANCE ALONE (SOLO)		1				1						0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 5'28"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:		1	1	11	1	1	11	1	1	11	1	17
a. VERBALIZES		1	1	11	1	1	1		1	11	1	16
b. PERFORMS		1		1	1		1					
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												0
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS									1			1
B. ATTEND. TO INSTR. MOTOR BEHAVIOR												0
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 6 SEQUENCE (A) B

TYPE I BEHAVIORS: VERBAL 10"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR				1								1
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION								1				1
b. STATEMENT												0
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR				1					1			2
2. DIRECTED TOWARD ANOTHER STUDENT												0
3. DIRECTED TO MUSIC SCORE OR BOOK				1					1			3
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)												0
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT												1
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)												0
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT					1	1	1					4
2. POINTED TO PRINTED MATERIAL								1	1			2
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)				1		1	1	1	1		1	6
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)					1				1			3
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED												1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 4'37"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL	1					1	1			1		4
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)					1			1				2
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 5'12"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES			1		1		1	1	1	1	1	7
b. PERFORMS					1		1	1	1		11	6
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR					1							1
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 6 SEQUENCE A (B)

TYPE I BEHAVIORS: VERBAL 32"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR								1	1	1		3
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT	1						1		1			3
c. INTERJECTION		1				1						2
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR		1			1			1		1		4
2. DIRECTED TOWARD ANOTHER STUDENT												0
3. DIRECTED TO MUSIC SCORE OR BOOK	1	1			1			1			1	5
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)												0
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT	1	1										2
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)		1										1
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	1	1	1					1	1			5
2. POINTED TO PRINTED MATERIAL								1				1
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)		1	1	1					1			4
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)		1	11	1		1	1	11	1	1	1	11
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED	1	1										2
2. STANDING												0
3. WALKING												
a. DIRECTED		1										1
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 4'51"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL		11				1			1	11		6
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)	1	1 1		1		1	1		1	1		8
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 3'46"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	1	1 1		1	1 1 1	1	11	1	1 1	1		16
b. PERFORMS				1						1		2
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR		1	1						1			3
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 7 SEQUENCE (A) B

TYPE I BEHAVIORS: VERBAL 3 23"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR	|	|		| |		| |	|					7
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)					|	|					2

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	|	|	|			| |	| |	| |	|	| | | |		14
2. DIRECTED TOWARD ANOTHER STUDENT		|			| |	|	| |	|	| |		10
3. DIRECTED TO MUSIC SCORE OR BOOK	|		|		| |	|					5
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)		|					|	|	|		5
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)							|					1
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT												0
4. OTHER DIRECTED	|			| |							3
5. NONDIRECTED (RANDOM)					|		|		|		3
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT												0
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)												0
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)			|		|	|			|	|		5
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED	|											1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 1'32"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL								1				1
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)								1				1
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)									1 1	1		3
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR							1			1		2
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 4'05"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	1 1 1		1		1	1	1	1	1	1 1 1		13
b. PERFORMS							1	1 1	1	1 1		6
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES									1	1		2
b. PERFORMS										1		1
3 LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR	1			1		1 1						4
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.			1				1		1			3
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 1 SEQUENCE A (B)

TYPE I BEHAVIORS: VERBAL 3½"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR		1	1				1					3
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT							1		1			2
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)	1	1			1	1						4

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	1	1		1		1	1	1	1			8
2. DIRECTED TOWARD ANOTHER STUDENT									1			1
3. DIRECTED TO MUSIC SCORE OR BOOK	1	1										2
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED					1			1				2
6. NONDIRECTED (RANDOM)		1		1		1						3
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)				1	1							2
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT												0
4. OTHER DIRECTED	1	1		1	1	1	1	1	1	1	1 1 1	12
5. NONDIRECTED (RANDOM)		1			1		1	1	1			6
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT												0
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED				1		1 1						3
4. NONDIRECTED (RANDOM)		1				1						2
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)												0
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED	1											1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 4'32"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL					1					1 1 1		4
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)						1	1					2
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR			1									1
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 4'14"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	1 1	1		1 1		1	11			1	1 1	11
b. PERFORMS			1	1							1111	6
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES				1					1			2
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR	1 1											2
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 8 SEQUENCE (A) B

TYPE I BEHAVIORS: VERBAL 38"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR	|	| |	|	| |								6
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT				|							1
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	| |	| |	| |	|	|	|	|		||||	|||| ||||	21
2. DIRECTED TOWARD ANOTHER STUDENT		|	| |					|			4
3. DIRECTED TO MUSIC SCORE OR BOOK												0
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED								||||	||||	||||||		18
6. NONDIRECTED (RANDOM)	|	|			|	|			|	|		6
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)			||||									5
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT		| |	|				|		|	|		6
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)	| | |				| |				|			6
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT												0
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED				|			|		|			3
4. NONDIRECTED (RANDOM)												0
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)							|					1
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED	|											1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 1'43"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)				1								1
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												
2. PERFORMANCE WITH INSTRUCTOR												0
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												
3. PERFORMANCE WITH OTHER STUDENTS									1	1		2
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												0
1. PERFORMANCE ALONE (SOLO)								1 1				2
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 5'21"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												10
a. VERBALIZES	1 1 1		1 1		1	1	1	1 1		1		3
b. PERFORMS						1		1		1		
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												3
a. VERBALIZES			1 1	1								0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												3
B. ATTEND. TO INSTR. MOTOR BEHAVIOR	1 1 1											1
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.			1									6
D. ATTENDANCE TO NONDIRECTIVE STIMULI												

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 8 SEQUENCE A (B)

TYPE I BEHAVIORS: VERBAL 2'38"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR	|	| |	|	|	| |	|	| |					10
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT	|											1
c. INTERJECTION	|											1
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	|	|			| |			|		|	6
2. DIRECTED TOWARD ANOTHER STUDENT		|			|							2
3. DIRECTED TO MUSIC SCORE OR BOOK												0
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED							|	|				2
6. NONDIRECTED (RANDOM)					|						| |	3
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)								| |				3
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT												0
4. OTHER DIRECTED	|		| |		|							5
5. NONDIRECTED (RANDOM)		| |		|	| |			| |		|	8
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT												0
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)										|		1
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)							| |					2
2. NEGATIVE (DISPLEASURE)				|							1
E. BODY (TRUNK) POSITION												
1. SEATED	|											1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 55"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL								1		1		2
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)									1			1
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR								1				1
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 5'19

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	1	1	1		1	1	1	1	1	1		13
b. PERFORMS							1	1	1			3
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES				1								1
b. PERFORMS						1				1		3
3. LISTENING DIR. TO RECORDED STIMULUS						1						1
B. ATTEND. TO INSTR. MOTOR BEHAVIOR		1					1	1				3
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												6

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 9 SEQUENCE (A) B

TYPE I BEHAVIORS: VERBAL 1'12"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR		1	1	1111								6
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT		1						1				2
c. INTERJECTION		1										1
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT										1		1
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	11	1	1	1	1	1	11	1				9
2. DIRECTED TOWARD ANOTHER STUDENT				1								1
3. DIRECTED TO MUSIC SCORE OR BOOK	111	1	1	1			1	1		11		10
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED	1											1
6. NONDIRECTED (RANDOM)						1	11	11		11		6
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)	1		11					1				4
2. DIRECTED TO MUSIC SCORE OR BOOK	1			1			1	1				4
3. DIRECTED TO MUSICAL INSTRUMENT												0
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)												0
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT												0
2. POINTED TO PRINTED MATERIAL									1			1
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)												0
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)			1			1		1		1		4
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED												1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 3'35"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL				1								1
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)								1				1
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR				1								1
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 4'18"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	1	1	1 1	1 1 1	1		1		1	1 1	1	13
b. PERFORMS			1		1							2
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES	1						1	1				3
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS								1				1
B. ATTEND. TO INSTR. MOTOR BEHAVIOR	1											1
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX — SUBJECT NUMBER 9 — SEQUENCE A (B)

TYPE I BEHAVIORS: VERBAL

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR				|	| |	| |	|					6
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION		|									1
b. STATEMENT												0
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT				|							1
c. INTERJECTION							|					1
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR		|	|	| |	|	|	|	| |	| |				10
2. DIRECTED TOWARD ANOTHER STUDENT			|		|		| |	|				6
3. DIRECTED TO MUSIC SCORE OR BOOK	|		|		|	|	| |	|				7
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)				|	|							2
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)		| |					|			|||||	| | | |	14
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT												0
4. OTHER DIRECTED						| |	|	|			|	5
5. NONDIRECTED (RANDOM)		| |										2
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT												0
2. POINTED TO PRINTED MATERIAL			|									1
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)												0
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)					|		| | |	|	|	| |	9
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED	| |					|	|					3
2. STANDING					|		|		|			3
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 1'24"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)		I										1
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL	I											1
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 5'21"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES		I	I	I	I	I	I	I	I	I		16
b. PERFORMS									IIIII			5
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES		I						I				2
b. PERFORMS										II		2
3. LISTENING DIR. TO RECORDED STIMULUS	I	I	I							I		7
B. ATTEND. TO INSTR. MOTOR BEHAVIOR				I	I							2
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.				I			II	III				7
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 10 SEQUENCE (A) B

TYPE I BEHAVIORS: VERBAL 17

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR				1111						1		5
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT					11							2
c. INTERJECTION		1										1
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	1	1	1		1			11		1	1	8
2. DIRECTED TOWARD ANOTHER STUDENT		1							111		1	5
3. DIRECTED TO MUSIC SCORE OR BOOK	1	11		1	1			11	11	111	1	11
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED					1							1
6. NONDIRECTED (RANDOM)				1								1
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK	1			1	1							3
3. DIRECTED TO MUSICAL INSTRUMENT	1		1		1							3
4. OTHER DIRECTED			1									1
5. NONDIRECTED (RANDOM)				1								1
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	11	1			11	11	11	1	1	1		13
2. POINTED TO PRINTED MATERIAL	1											1
3. OTHER DIRECTED			1									1
4. NONDIRECTED (RANDOM)	1	1	1		1	111	1	11	1	1		12
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)		1							1			2
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED	1			1	1							3
2. STANDING				1								1
3. WALKING												
a. DIRECTED			1		1							2
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 5'07"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)								1				2
a. INITIAL												2
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)									11			
2. PERFORMANCE WITH INSTRUCTOR												0
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												
3. PERFORMANCE WITH OTHER STUDENTS		1						1				4
a. INITIAL		1				1						11
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)		1	1			11	1	11	1		11	
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												0
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 2'28"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:		11	1	1	11	11	1	11	111	111	11	17
a. VERBALIZES		1	1	1	11	1	11	1	111	111	1	13
b. PERFORMS						1	1	111			111	
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												0
a. VERBALIZES									111			3
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS					1							1
B. ATTEND. TO INSTR. MOTOR BEHAVIOR		1										1
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX — SUBJECT NUMBER 10 — SEQUENCE A (B)

TYPE I BEHAVIORS: VERBAL 55"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR							| |	||				4
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION		|									1
b. STATEMENT							| |			|	3
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	|	|		|		|	|	|	|	|	|	8
2. DIRECTED TOWARD ANOTHER STUDENT										| |			2
3. DIRECTED TO MUSIC SCORE OR BOOK								| |	|	| |		5
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)		|		|		|		|			|	5
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK							|					1
3. DIRECTED TO MUSICAL INSTRUMENT	|				|							2
4. OTHER DIRECTED											|	1
5. NONDIRECTED (RANDOM)				|								1
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	|							|		|	3
2. POINTED TO PRINTED MATERIAL							|	| |			3
3. OTHER DIRECTED						|					|	2
4. NONDIRECTED (RANDOM)						|			|			2
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)												0
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED	||											1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 6'02"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)									1			1
a. INITIAL									1			1
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												
2. PERFORMANCE WITH INSTRUCTOR												0
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												
3. PERFORMANCE WITH OTHER STUDENTS												5
a. INITIAL	1	1	1		1			1				7
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)		1			1			11	1	11		
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												0
1 PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 3'28"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:		1										20
a. VERBALIZES		1 1	1	1	1 1	1	1	1 1 1	1 1	1 1 1 1	1	3
b. PERFORMS	1	1			1							
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:								1 1				2
a. VERBALIZES										1 1 1		3
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS						1	1					2
B. ATTEND. TO INSTR. MOTOR BEHAVIOR												0
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 11 SEQUENCE (A) B

TYPE I BEHAVIORS: VERBAL 29"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR	1				11		11	1			1	7
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION	1											1
b. STATEMENT						1	1		1 1			4
c. INTERJECTION		1					1					2
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	1	1	1	1	1	1		1	1 1	1		10
2. DIRECTED TOWARD ANOTHER STUDENT												0
3. DIRECTED TO MUSIC SCORE OR BOOK	1			1	1		1	1	1 1	1		8
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)		1	1			1						3
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT	1			1								2
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)			1									1
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	1 1		1		1	1		1	1	1	1	9
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)	1	1			1	1	1		1	1		8
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)												0
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED	1											1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 7'02"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL	IIII	I		I	II		I					9
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)		I	I				I	II	I			6
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS 2'26"												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	IIII	I	I	I	I	I	II		I	I	II	17
b. PERFORMS		I	I	I	I					I	I	6
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												0
b. ATTEND. TO INSTR. MOTOR BEHAVIOR												0
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 11 SEQUENCE A (B)

TYPE I BEHAVIORS: VERBAL

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												11
1. DIRECTED TO INSTRUCTOR												0
2. DIRECTED TO ANOTHER STUDENT												
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												4
a. QUESTION												8
b. STATEMENT												2
c. INTERJECTION												
2. DIRECTED TO ANOTHER STUDENT												0
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												6
1. DIRECTED TOWARD INSTRUCTOR												0
2. DIRECTED TOWARD ANOTHER STUDENT												11
3. DIRECTED TO MUSIC SCORE OR BOOK												0
4. DIRECTED TO MUSICAL INSTRUMENT												3
5. OTHER DIRECTED												2
6. NONDIRECTED (RANDOM)												
B. ARM AND HAND MOVEMENT												0
1. RAISED (ATTENTION SEEKING)												2
2. DIRECTED TO MUSIC SCORE OR BOOK												5
3. DIRECTED TO MUSICAL INSTRUMENT												3
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)												
C. FINGERS												11
1. DIRECTED TO MUSICAL INSTRUMENT												3
2. POINTED TO PRINTED MATERIAL												5
3. OTHER DIRECTED												3
4. NONDIRECTED (RANDOM)												
D. PARALINGUISTIC FACIAL EXPRESSION												0
1. POSITIVE (PLEASURE)												0
2. NEGATIVE (DISPLEASURE)												
E. BODY (TRUNK) POSITION												1
1. SEATED												0
2. STANDING												
3. WALKING												0
a. DIRECTED												0
b. NONDIRECTED												

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 5'26"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL	1	1 1				1			1			5
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)	1 1			1 1	1 1	1	1	1		1		10
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)									1			1
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 2'14"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES		1 1	1	1		1 1	1 1 1	1 1	1 1	1		18
b. PERFORMS		1		1						1		3
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR	1		1					1				3
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 12 SEQUENCE (A) B

TYPE I BEHAVIORS: VERBAL 0"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR												0
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	|	| |	| |	|	|	|	|	|	|	|	|	|	12
2. DIRECTED TOWARD ANOTHER STUDENT												0
3. DIRECTED TO MUSIC SCORE OR BOOK		|			|							2
4. DIRECTED TO MUSICAL INSTRUMENT	|					|		|			3
5. OTHER DIRECTED			|							|		2
6. NONDIRECTED (RANDOM)	|		| |	|	|		|		|			7
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT	|									|		2
4. OTHER DIRECTED									|			1
5. NONDIRECTED (RANDOM)												0
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	|	|	|		|			|		|		6
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)		|	|	|		|					|	5
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)					|							1
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED	|											1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 5' 7"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL	III		I			I		I	I	I		8
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)				I						II		3
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 4' 12"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	II	I	I	I	I	II	II		I	I	I	13
b. PERFORMS		I	I	I	I	I		I				5
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR									I			1
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX — SUBJECT NUMBER 12 — SEQUENCE A (B)

TYPE I BEHAVIORS: VERBAL 15"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR	1		1									2
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION		1										1
b. STATEMENT						1	1		1			3
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR				1 1 1				1				4
2. DIRECTED TOWARD ANOTHER STUDENT												0
3. DIRECTED TO MUSIC SCORE OR BOOK	1			1 1 1				1				5
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED						1 1						2
6. NONDIRECTED (RANDOM)						1						1
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT	1											1
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)												0
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	1			1			1		1			4
2. POINTED TO PRINTED MATERIAL									1			1
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)	1		1		1							3
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)		1										1
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED	1											1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 9'14"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL	1		1	1	1 1				1			6
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)	1 1		1		1 1	1						6
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 2'12"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	1 1 1	1	1		1 1	1 1		1	1 1	1 1		15
b. PERFORMS	1 1									1		3
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR						1						1
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI									1			1

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 13 SEQUENCE (A) B

TYPE I BEHAVIORS: VERBAL 07'11

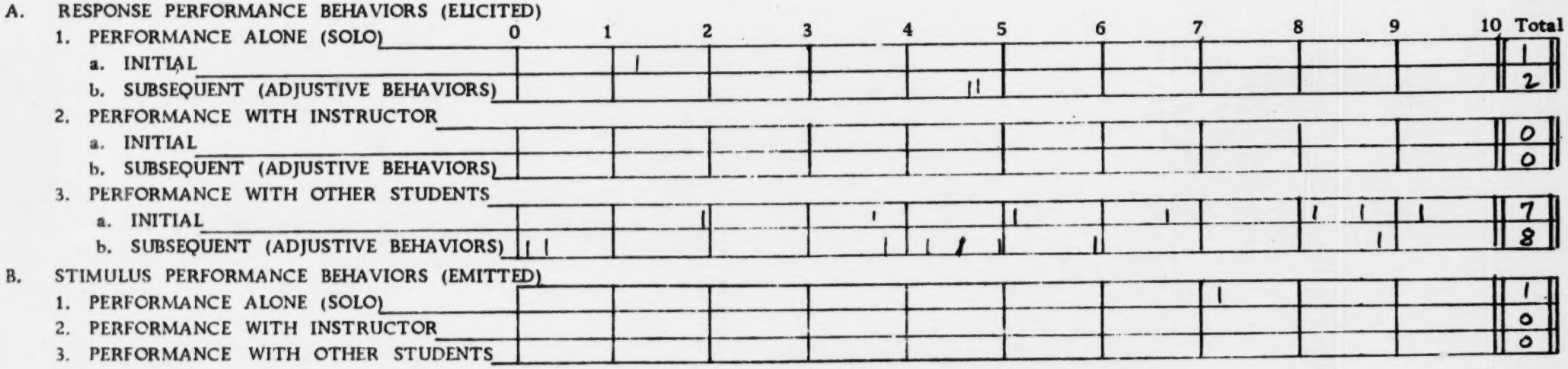
	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR		|	|	|	|							3
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

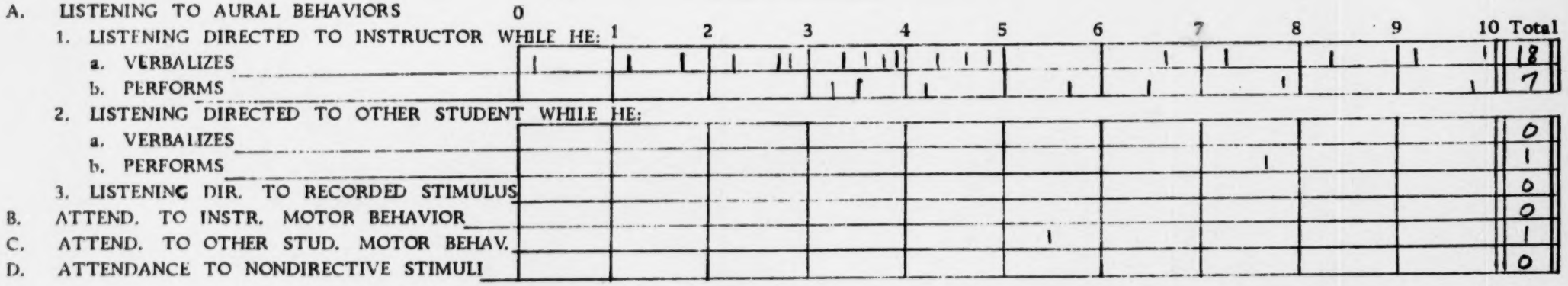
	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR		| | |	| |		| | |	|	|	| |	|	| |	| |	16
2. DIRECTED TOWARD ANOTHER STUDENT				|		|		| |			5
3. DIRECTED TO MUSIC SCORE OR BOOK	|	| | |	| |	|	| |		|	| |		| |	| |	17
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)							|	|				2
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK			|									1
3. DIRECTED TO MUSICAL INSTRUMENT	|			|		|					3
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)						|					1
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	|			|	| | |		|		|	|	8
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)			|	|	| |		|	|		|	7
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)												0
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED	|											1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 6'19



TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 2'44"



OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 13 SEQUENCE A (B)

TYPE I BEHAVIORS: VERBAL 32"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR							1	11				6
2. DIRECTED TO ANOTHER STUDENT								1				1
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	1	1	1	1	1	1		1	1 1	1		10
2. DIRECTED TOWARD ANOTHER STUDENT							1		1 1			3
3. DIRECTED TO MUSIC SCORE OR BOOK	1	1	1	1		1	1	1	1 1	1		10
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED					1							1
6. NONDIRECTED (RANDOM)												0
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT	1											1
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)												0
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	1	1	1			1		1	1 1	1		8
2. POINTED TO PRINTED MATERIAL							1					1
3. OTHER DIRECTED					1							1
4. NONDIRECTED (RANDOM)	1	1	1			1	1		1 1			8
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)								1				1
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED	1											1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 5'43"

A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)

	0	1	2	3	4	5	6	7	8	9	10	Total
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL									1	1		2
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)									1	11		3
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL	1	11	1	1	1	1		1				7
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)	11			1	1			11				6
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 3'08"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	1	11 1	1	1	1 1	111	1	1111	11 1	1111		23
b. PERFORMS	1								1 1		1	4
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES							1	111				3
b. PERFORMS									11			2
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR						1						1
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 14 SEQUENCE (A) B

TYPE I BEHAVIORS: VERBAL 17"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR				1 1					1			3
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR		1	1 1	1		1		1 1				7
2. DIRECTED TOWARD ANOTHER STUDENT							1				1	2
3. DIRECTED TO MUSIC SCORE OR BOOK	1	1	1	1		1		1	1		1	8
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)			1				1	1				3
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK	1 1											4
3. DIRECTED TO MUSICAL INSTRUMENT	1 1							1	1	1		5
4. OTHER DIRECTED							1			1		2
5. NONDIRECTED (RANDOM)												0
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	1	1		1	1				1			5
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)		1	1		1		1	1				5
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)		1										1
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED	1											1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 5'54"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL	|	| |	|		| |	|	|	|	|			|		9
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)			|				|			|	| | |	6
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)							|	|				2
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 2'51"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	| |	|	|	|	| |		|	|	|	| |	| | |	14
b. PERFORMS	|	|	|	|			|					5
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR												0
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 14 SEQUENCE A (B)

TYPE I BEHAVIORS: VERBAL 0"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR												6
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	|	||	|		|	|	|	|	|	|	|		9
2. DIRECTED TOWARD ANOTHER STUDENT								|				1
3. DIRECTED TO MUSIC SCORE OR BOOK				|								1
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED						|			|	|		3
6. NONDIRECTED (RANDOM)	|	|	|		|	|		|	|	|	|		9
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT	|											1
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)												0
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	|				|					|	|		4
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED										|	|		2
4. NONDIRECTED (RANDOM)					|									1
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)											|			1
2. NEGATIVE (DISPLEASURE)														0
E. BODY (TRUNK) POSITION												
1. SEATED	|													1
2. STANDING														0
3. WALKING														
a. DIRECTED														0
b. NONDIRECTED														0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 6'11"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL					1		1		1			3
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)											1	1
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL	1	1		1	1	1	1			1	1	8
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)				1		1	1			1		4
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 2'43"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES		1	1		1		11	1	1	1	1	13
b. PERFORMS						1		1				3
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES					1							1
b. PERFORMS									1			1
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR		1										1
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 15 SEQUENCE (A) B

TYPE I BEHAVIORS: VERBAL 2'05"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR			III	I	II	I		II		III		12
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION				I	I	I					I	4
b. STATEMENT				II	I			I		I	I	7
c. INTERJECTION				I		I	I					3
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR		I	I I	I			I	I		I	I	9
2. DIRECTED TOWARD ANOTHER STUDENT												0
3. DIRECTED TO MUSIC SCORE OR BOOK	I		I I	I	I			I	I		I	8
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)			II	I								4
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK											II	2
3. DIRECTED TO MUSICAL INSTRUMENT	I I				I I				I			5
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)	I				I I				I	I	II	7
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	I	I										2
2. POINTED TO PRINTED MATERIAL		I										1
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)												0
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)							III	I				3
2. NEGATIVE (DISPLEASURE)		I						I				2
E. BODY (TRUNK) POSITION												
1. SEATED	II											1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 5'28"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL	1	1	1	1	1						1	6
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)			1 1				1 1	1 1				6
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL				1								1
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)								1				1
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 2'56"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES		1	1 1	1			1	1	1 1 1	1		10
b. PERFORMS	1		1		1				1			4
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR								1 1				2
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 15 SEQUENCE A (B)

TYPE I BEHAVIORS: VERBAL 1'42"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR												6
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION												4
b. STATEMENT												5
c. INTERJECTION												2
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR												12
2. DIRECTED TOWARD ANOTHER STUDENT												0
3. DIRECTED TO MUSIC SCORE OR BOOK												5
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)												5
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT												4
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)												4
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT												7
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)												6
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)												3
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED												1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 4' 37"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL	| |	|		|			|				5
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)	|	|				|			|		4
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)				|								1
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 5'36"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	|	| |	|	|	| |	|	| |	|	|	|	|	14
b. PERFORMS	|	| |	|	|	|	|	|	|	|	|	| |	10
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR				|		|					2
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 16 SEQUENCE (A) B

TYPE I BEHAVIORS: VERBAL 19''

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR		1			1		111		11			7
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION						1						1
b. STATEMENT	1	1	11		1			11				7
c. INTERJECTION							1	1		1		3
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)				1								1

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	1	1			1		111	11	11	11	111	16
2. DIRECTED TOWARD ANOTHER STUDENT												0
3. DIRECTED TO MUSIC SCORE OR BOOK	11	1			1		11	11	11	11	1111	17
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)												0
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT	1		1			1		1				4
4. OTHER DIRECTED												1
5. NONDIRECTED (RANDOM)			1									2
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	11	1	1	1	11		1	1	11	1		11
2. POINTED TO PRINTED MATERIAL							1					1
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)	1	1	1		11		11		11	1		10
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)	1			1		1	1	11		1		7
2. NEGATIVE (DISPLEASURE)							1					1
E. BODY (TRUNK) POSITION												
1. SEATED	1											1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 4'39"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL	|	|					|					3
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)		||	|	|		|||	|		|	|	|	||
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)					| |							2
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 4'48"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	|	||	|	|	|	|		||	|	||	|||	15
b. PERFORMS		|						||		|		5
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR												0
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 16 SEQUENCE A (B)

TYPE I BEHAVIORS: VERBAL 18"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)							1		1	1		3
1. DIRECTED TO INSTRUCTOR												0
2. DIRECTED TO ANOTHER STUDENT												
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR						1						1
a. QUESTION						1						1
b. STATEMENT												0
c. INTERJECTION												
2. DIRECTED TO ANOTHER STUDENT												0
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT		1 1	1		1		1		1 1	1		8
1. DIRECTED TOWARD INSTRUCTOR												0
2. DIRECTED TOWARD ANOTHER STUDENT												0
3. DIRECTED TO MUSIC SCORE OR BOOK												0
4. DIRECTED TO MUSICAL INSTRUMENT									1	1		2
5. OTHER DIRECTED		1 1	1				1		1			5
6. NONDIRECTED (RANDOM)												
B. ARM AND HAND MOVEMENT												0
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												2
3. DIRECTED TO MUSICAL INSTRUMENT	1	1										1
4. OTHER DIRECTED		1										0
5. NONDIRECTED (RANDOM)												
C. FINGERS												4
1. DIRECTED TO MUSICAL INSTRUMENT	1	1		1		1						0
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												4
4. NONDIRECTED (RANDOM)		1	1		1		1					
D. PARALINGUISTIC FACIAL EXPRESSION												0
1. POSITIVE (PLEASURE)												0
2. NEGATIVE (DISPLEASURE)												
E. BODY (TRUNK) POSITION										1		2
1. SEATED	1									1		1
2. STANDING												
3. WALKING										1 1		2
a. DIRECTED												0
b. NONDIRECTED												

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 4'02"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL	| |	|		|	|		|		|		7
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)	| |	| |										3
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 6'36"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	|	|	||		|			| |	|	| | |		11
b. PERFORMS		| |					|	|	|	|	6
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR				| |							2
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 17 SEQUENCE (A) B

TYPE I BEHAVIORS: VERBAL 1'15"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR			1	1			1		1	1 1		6
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION		1	1					1	1			4
b. STATEMENT						1			1	1		3
c. INTERJECTION							1					1
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	1	1 1	1	1		1 1		1	1			9
2. DIRECTED TOWARD ANOTHER STUDENT												0
3. DIRECTED TO MUSIC SCORE OR BOOK			1	1			1	1	1			5
4. DIRECTED TO MUSICAL INSTRUMENT				1								1
5. OTHER DIRECTED												0
6. NONDIRECTED (RANDOM)	1	1	1									3
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT	1											1
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)												0
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	1					1			1	1 1		5
2. POINTED TO PRINTED MATERIAL										1 1		2
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)					1			1			1	3
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)		1				1		1				3
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED	1											1
2. STANDING												0
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 5'57"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL	|	|		|			|	|	|	| |	8
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)				|	| |	|		|	|			6
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)												0
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 4'04"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	|		|	|		|	|		|	|		7
b. PERFORMS	|	|			|	|					|	5
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR					|	|						2
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0

OBSERVABLE PERFORMANCE LEARNING BEHAVIOR CLASSIFICATION INDEX

SUBJECT NUMBER 17 SEQUENCE A (B)

TYPE I BEHAVIORS: VERBAL 1'23"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE VERBAL BEHAVIORS (ELICITED)												
1. DIRECTED TO INSTRUCTOR		|	| |	|	|	|			|	|	|	|	10
2. DIRECTED TO ANOTHER STUDENT												0
B. STIMULUS VERBAL BEHAVIORS (EMITTED)												
1. DIRECTED TO INSTRUCTOR												
a. QUESTION					|		|					2
b. STATEMENT	|											1
c. INTERJECTION												0
2. DIRECTED TO ANOTHER STUDENT												
a. QUESTION												0
b. STATEMENT												0
c. INTERJECTION												0
C. NONDIRECTED VERBAL BEHAVIORS (RANDOM)												0

TYPE IIA BEHAVIORS: MOTOR (PERFORMANCE AND NONPERFORMANCE RELATED)

	0	1	2	3	4	5	6	7	8	9	10	Total
A. VISUAL CONTACT												
1. DIRECTED TOWARD INSTRUCTOR	| |	| |	|	|		|		|		| |		10
2. DIRECTED TOWARD ANOTHER STUDENT												0
3. DIRECTED TO MUSIC SCORE OR BOOK							|		|	|	3
4. DIRECTED TO MUSICAL INSTRUMENT												0
5. OTHER DIRECTED	|											1
6. NONDIRECTED (RANDOM)	| |	| |	| |		|				|			8
B. ARM AND HAND MOVEMENT												
1. RAISED (ATTENTION SEEKING)												0
2. DIRECTED TO MUSIC SCORE OR BOOK												0
3. DIRECTED TO MUSICAL INSTRUMENT	|											1
4. OTHER DIRECTED												0
5. NONDIRECTED (RANDOM)												0
C. FINGERS												
1. DIRECTED TO MUSICAL INSTRUMENT	|				|							2
2. POINTED TO PRINTED MATERIAL												0
3. OTHER DIRECTED												0
4. NONDIRECTED (RANDOM)				|								1
D. PARALINGUISTIC FACIAL EXPRESSION												
1. POSITIVE (PLEASURE)		|	|			|			|	|		5
2. NEGATIVE (DISPLEASURE)												0
E. BODY (TRUNK) POSITION												
1. SEATED	|											1
2. STANDING												6
3. WALKING												
a. DIRECTED												0
b. NONDIRECTED												0

CLASSIFICATION INDEX (continued)

TYPE IIB BEHAVIORS: MOTOR (PERFORMANCE RELATED ONLY) 3'27"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. RESPONSE PERFORMANCE BEHAVIORS (ELICITED)												
1. PERFORMANCE ALONE (SOLO)												
a. INITIAL	|	| |	|	|		|	|	|	|	|		10
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)			|			|||			||	|	7
2. PERFORMANCE WITH INSTRUCTOR												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
3. PERFORMANCE WITH OTHER STUDENTS												
a. INITIAL												0
b. SUBSEQUENT (ADJUSTIVE BEHAVIORS)												0
B. STIMULUS PERFORMANCE BEHAVIORS (EMITTED)												
1. PERFORMANCE ALONE (SOLO)							|					1
2. PERFORMANCE WITH INSTRUCTOR												0
3. PERFORMANCE WITH OTHER STUDENTS												0

TYPE III BEHAVIORS: ATTENDING (NONVERBAL) 4'29"

	0	1	2	3	4	5	6	7	8	9	10	Total
A. LISTENING TO AURAL BEHAVIORS												
1. LISTENING DIRECTED TO INSTRUCTOR WHILE HE:												
a. VERBALIZES	|||	|	| |	|		| |	|	|	|		|	12
b. PERFORMS		|	| |			| |			|	|	7
2. LISTENING DIRECTED TO OTHER STUDENT WHILE HE:												
a. VERBALIZES												0
b. PERFORMS												0
3. LISTENING DIR. TO RECORDED STIMULUS												0
B. ATTEND. TO INSTR. MOTOR BEHAVIOR												0
C. ATTEND. TO OTHER STUD. MOTOR BEHAV.												0
D. ATTENDANCE TO NONDIRECTIVE STIMULI												0